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INFLUENTIAL FALLACIES ABOUT EDUCATION.[1]

I REGRET any suggestion of discouragement or professional low spirits that there may be in the wording of my theme. Doubtful as I am of my power to treat it adequately, I can at least assure you that if I had been discouraged or low-spirited, I should never have undertaken it. Nor should this theme carry with it such suggestion. Fallacies in one shape or another are the penalty of thought as conducted by the lesser deities known as men and women, or even as teachers. The price of effort, however well intended, or carefully directed, is a measure of error. Willingness to face the error is a pledge of our integrity; and power to learn from mistakes is at once a form of our self-respect and our social piety.

The ignoring of these somewhat axiomatic considerations is the most widely influential fallacy in education. Too much time and energy are wasted in the effort to eliminate entirely the element of risk and danger from the experiment. Conversely, not enough confidence is felt in the good results of intelligently conducted experiment. Definiteness, precision, and accuracy are taken out of their proper province — that of ever-present factors in the process of education — and made indispensable parts of the material results. Hence arises the confusion of thought in students, teachers, and public concerning the nature of education. The mind that permits itself to be betrayed into an accept-

[1] Read at the meeting of the New England Association of Colleges and Preparatory Schools.

ance of the popular disjunction between, say, information and discipline, or practical efficiency and culture, or a large income and a quiet conscience, or the ability to add to human knowledge and skill in holding one's tongue, is lost. False alternatives of this sort are the pest of education. The aim of education is not met by an "either-or," even when it is so generously interpreted as to embrace the whole world between its terms. Nothing short of "whatever is" should ideally satisfy the honest ambition of a teacher of ABC's. The right method of mastering the alphabet contains all the law and the gospel of education; and the absolutely right method is still to seek, as are also the perfect teacher and the model pupil. These facts are too often forgotten. The college finds fault with the secondary schools; the schools blame the kindergarten and the nursery; and all join to charge the home and parents with errors of omission and commission unto the third and fourth generation.

If these objections were all well taken, the reason for the existence of schools and education would disappear. Once taught, always taught, would be the history of the intellectually satisfied little molecule of mind. Infancy would become of age by repeating itself. Growth would be exchanged for iteration, and the joy of acquisition would be all in retrospect.

Certainly this recital is doleful enough to be an idiot's tale and history, but the fallacy of regretting the conditions that make it impossible is not always obvious. The one method applicable to all minds, the absolutely best scheme of studies, the infallible recipe for producing success in life—these are the forms in which fallacy unstrings the points of our endeavors as teachers. Strange companionships come about in the effort of men to present a sturdy opposition to influences that seem threatening aspects of education, because the influences are in themselves harmful and obtrusive. The habit of looking to education as their cause is a form of fallacy shared by the most enlightened and prudent of all time. It is not unlike the notion that because all church members ought to be saints, any shortcoming in the deacon is the fault of the church. Jonathan Edwards, in his letter to Sir William Pepperell on the education

of girls among the Stockbridge Indians, charges the same faults upon the characteristic English education of his day that Professor William James lays bare in his address of last summer to the Harvard alumni. And still more interesting is it to reflect that St. Augustine had been before them both in the acuteness and competence of his arraignment of the system whose worst results he had evaded, as he believed, only by the grace of God. The virtuous force of bad example in a world traditionally declared by its Maker to be all very good, in spite of the flaws and flecks in it, is not utilized by breaking the connection between the evil in the world and the world's Maker, nor by attempting to force into exile and solitary confinement forces that, however bad they may be, are always good for something.

Snap judgments, conventional estimates, surface views, are nowhere more dangerous than in the field of adverse criticism, where the critic is tempted to think himself candid, when he is really only taking things easy. The discerning distillation of the soul of good out of the demand for short-cuts in education, of the influence of commercialism, of worship of system, of dependence upon elaborate machinery, of trust in vain repetition, is the real purpose for the enumeration of them as evil. To turn time backward, and try to restore the alienated majesty of music and gymnastic, of gold and silver embroidery, of handicrafts, or of the chores of our New England ancestors, is only to vary one set of mistakes by another. Good Sir Andrew Aguecheek wails out the desolation of many who think themselves vastly his superiors when he cries: "What is 'pourquoi'? do or not do? I would I had bestowed that time in the tongues, that I have in fencing, dancing, and bear-baiting. O, had I but followed the arts!" Good men have doubtless saved their souls and bad men lost them as much in spite of chores as by reason of them. And so of all the rest. There is more in any man than the best system of education will account for; there is much in the best of us that we should not dare to hold any training or teacher responsible for. But we are tempted to supply the demand for definiteness in our theory and practice of teaching. We respond to the call for well-rounded courses of education by contrivances

that often end by persuading us that their good results might not have followed from any one of a score of other combinations —or from no combination at all, provided the appropriate motive or stimulus operated.

Almost the exact converse of this lack of faith and courage is the trust in what is striking and obtrusive. Is it not possible that appliances may be so multiplied as to defeat their own end in education as in manufactures? The mind may be distracted and worried by its labor-saving devices. The student may be bewildered by his advantages and mastered by his instruments. As long as these truths are so obviously true, and so readily recognized, and so familiarly presented to our experience, it seems remarkable that so fallacious a value should attach to the size and shape and money value of the body in which they appear to us. The amount of endowment, the value of "the plant," the extent and cost of apparatus, the number of books in the library, the expense of administration, the number and cost of scholarships, are far more influential on the public mind when they appear as figures in thousands and tens of thousands than as forces in human units. The money spent on school buildings is often the best evidence of a town's interest in education. The ability to spend money in such ways often exhausts the ambition of a community in things intellectual.

Still more dangerous is the form of this fallacy affecting the aims of education and the teachers themselves. Its most specious form is that of the demand for a "suitable support," for a way of living congenial to one's tastes, for a recognition in salary and social privilege of the scholar's services to the community. The scholar who is worthy the name needs no pay for his sacrifices; for he makes none. An artist in soul and mind has the same satisfaction in his labor that a painter, sculptor, poet, or other maker has. His rewards are not the less real for being inconvertible, incommunicable, and non-transferable. But it requires increasing clearness of vision and steadfastness of purpose on his part to escape the infection of fashion, display, and luxury maintained, not only as an end in itself, but as a sign of an approving Providence. As we approach late middle age, it

becomes more and more difficult to avoid wondering whether we have sinned, or our fathers, that we have a slender bank account, and even slenderer store of strength and eyesight. To have taught helpfully is not enough. The teacher may not be satisfied to rank his influence with good air, fresh water, and the blessed spirit of which thou canst not tell whither it cometh. On the contrary, he must leave his stamp on his generation. He must have a personal hall-mark for his workmanship, his pattern, his cut. Or he must "do something," as the phrase goes. "Doing something" again takes on aggressive forms. It is expressed in foreign degrees, editorial work, criticism, and all the items that show so well in the concluding summary of biographical estimates. The longer the list of publications a teacher can show, the greater the satisfaction he may legitimately allow himself. On the other hand, if he does not publish, does not investigate, has not the spirit of research into the neglected corners of learning, or has not the temper of discovery or adventure in the seas and deserts of knowledge, then too often he is tempted to accuse himself of intellectual barrenness and falls into despair; or, still worse, he is tempted to take refuge in the emphasis of the disciplinary value of routine, in the elaboration of method for its own sake. For these things are as exact, precise, definite, and impressive as discovery or originality. A most successful teacher of many years' experience in India attributes her first stimulus to learn the language well, to a prayer of a native Bible woman: "My dear father, I ask only one thing of thee—that thou wilt look at this young green thing here and her husband no better. They know nothing at all. Only help them to get their tongues twisted." The young green thing referred to justified the terms of her description by not knowing in the least what the prayer meant, and by the time she had really found out, it was in a fair way to be realized.

The fallacy of method has perhaps its worst forms in the often-unsuspected worship on the teacher's part of his way simply because it is his. This can hardly fail to injure the student. Exposure to this type of educational germ would doubtless oftener be fatal if the student were less frequently

protected by the inoculation of his own wilfulness. The corresponding fallacy on his side is a dependence upon what he calls interest in his work. It is usually only another name for doing what he pleases, when he pleases—and only then and that. The fallacy of confusion can go no farther than in the identification of this game of chance for the highest stake with work at once the most orderly and the most miraculous thing in the world. Interest as the reward of work is the truth triumphant. Interest as the motive to work is the white lie of the code of character. This insistence upon rigid form and personal interest takes unexpected shapes. What has endeared itself by real or fancied associations is stubbornly maintained as productive of good that it may never have done or that at all events many other devices might have secured. Schools, teachers, systems, like the noble Moor, are loved for the dangers they have passed, and oftentimes with as calamitous results.

Much of the present widespread discussion concerning the college as an independent stage of education is marked by the presence of this fallacy. In the fear that harm may come to the college idea, the wildest conclusions are tolerated and the emptiest premises accepted. Whatever the services of the college in the past, whatever the honor and dignity of its history and, however strong the desire of innocent hearts for its continuance, that continuance will depend ultimately upon the ability of the college to do a sort of work that is needed and that nothing else can do with as little waste of energy. If the school and the university can successfully do its work between them, the college will not be allowed to prolong its life by another illustration of pathetic fallacy in its death song. The college may as reasonably be tried on its merits as the district school or the endowed academy. Those of us who love it or live by it will have to learn, for the first time perhaps, or regretfully over again, that our loving and our living are in the strictest sense private concerns; their highest value as facts being their indifferency. But in our fallibleness we do not see them so. Our personal attachment to our actions and our affections, even when, like Mrs. Malaprop, we began with a little aversion, becomes our strongest

argument for their maintenance and confuses all our judgments of them. Witness the case of the old school-principal who defended his preparation of a college freshman from the fault-finding of the college registrar on the ground that there could be no truth in the charges, as the freshman had been prepared by precisely the same methods that had been in use for forty years. If his endowment of loyalty had only included the adjustments of progress among its objects, the school world would have been the better, and the man himself none the worse certainly.

In this connection properly appears the alumni fallacy. It consists of a strong preference for the old college, the old days, the ways of our time, the men of our class, and the virtues and vices, the strength and the weakness, of our special mixture of human nature, together with a definitely expressed regret for changes that are not denied to be improvements. Some tastes are respectable only as a concession to individual limitation. As factors of the social well-being, they are unpardonable. A recent discussion in the London *Times* on the general subject of the constitution of matter illustrates the confusions growing out of this fallacious temper. A leader headed "Lord Kelvin, Science and Greek" deals with the confidence claimed for Lord Kelvin's opinions and his public expression of them because he is a "prince of science." The failure on the part of the public to understand the issue between him and his critics, and the failure of his critics to understand him or the public's point of view, are attributed to the public's lack of knowledge of Greek, and is accounted for by the desire to get along without Greek in the universities. The controversy grows more and more involved, and the confusion of thought more complete, as one after another the points are made, with a vigor that would have been surprising if that faculty had not been fully occupied by the writer's seriousness, that the critics and the interested public had all studied Greek and valued it second only to science or something else, although they felt that they might have given it the first place in their esteem if they had not been compelled to study it. Other contributions to the columns of the *Times* take into con-

sideration the real meaning attaching to Lord Kelvin's title as "prince of science." It appears that some scientists deny that their branches of human inquiry admit of such relation even by way of "a figger of speech." And so, after questioning whether science may best be studied by way of Greek, the plain reader is confronted with the doubt whether there is any such thing as science, or the scientific attitude, or scientific attainment. He might reflect that there are still facts, many facts and awkward ones, and that they affect learned scientists much as they do plain men and women of everyday passions.

Time and discussion move faster in some respects in this country than in England, but there is similar confusion and restlessness, with like inconclusiveness, on subjects allied to these. We are interested in the length of the college course, the proper place of technical study, and the claim of religion to serious attention as a discipline of the intellect. Nobody should regret the prominence given to these subjects, but everybody should regret the waste of strength, dissipated in bad logic and faint courage and misplaced emotion. Things are not so bad, after all, and yet they are not so good that they might not be better. The union of this optimism in the general trend of things with absolute candor about their details is the finest fruit of ripe reason.

But it is not left to teachers to try their experiments and pay their penalties in serene independence of all but the considerations affecting their class. The situation is complicated by the fallacies of feeling constantly affecting the pupils and public they have to work with. Some of these errors are too remote in their origin and too stubborn in character to admit of control by any forces except those of time and experience and contact with life. But there are others with which every teacher is painfully familiar. They result from the mistaking of the scheme of education itself. The student puts success in meeting classroom requirements in place of his own initiative, or he values his reputation among his mates higher than he does the power of doing work. In like manner, parents covet for their children the distinction that high rank in the class lists and prizes and membership in exclusive societies confer. These easily come to

be valued for themselves, instead of for the slight service they render as outward and visible signs of spiritual wealth. Truly, there can be few fallacies more deplorable than the false estimate of success that exhausts a young man or woman in the effort to gain prominence before he begins the real work of life. The notion that character is as completely revealed in the trifles as in the important affairs of existence is likely to be misapplied. Parents believe in a general endowment of intelligence which, under the name of capacity, they expect their children to acquire. They believe also that there is a general faculty of attention which can be turned on or off at will, and can be commanded to its full extent at any time by a properly trained mind—one that has had advantages. These are the parents who object to any interference with their children's health or the family plans by school programs, and who yet are surprised if the name of plants or constellations are unfamiliar, and dead languages are unintelligible, and modern languages are not spoken fluently. Often their ideals are vaguely expressed in phrases like, "Concentration is the whole secret;" or, "A love of knowledge is the one thing necessary." And many a man is heard to attribute his share of success in life to the influence of such a phrase. But his experience only illustrates the fact that men's behavior is often more rational than the account they can give of it.

So long a list of fallacies could never have been collected about a subject to which men are indifferent. So much confusion of thought could not exist concerning a matter that men were willing to ignore. So many forms of the same mistake could not recur about an interest that men could make up their minds to forget. The truth is that, next to religion, education occupies the best part of the attention of the best minds. And the existence of all this confusion bears testimony to the vital force asserting itself through manifold forms of energy. There is good in all; none of them is perfect; the mission of each is to challenge attention, to disappoint overconfidence, to reward patience.

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THE HIGH-SCHOOL PROGRAM OF STUDIES AND THE STUDENT'S CURRICULUM.

I.

INTRODUCTION.

THE Committee on College Entrance Requirements in its report, rendered to the National Educational Association in 1899, took special pains to define the terms "program of studies," "curriculum," and "course of study," and their definitions make clear some very useful distinctions. The public, however, still uses the phrase "course of study" to mean at different times that which the educator denotes by the three separate terms. As in this paper the definitions given by the aforesaid committee will be strictly followed, it seems advisable to quote them at length from the committee's report. This states:

> Three distinct terms seem to be needed: (1) *program of studies*, which includes all of the studies offered in a given school; (2) *curriculum*, which means the group of studies schematically arranged for any pupil or set of pupils; (3) *course of study*, which means the quantity, quality, and method of the work in any given subject of instruction.
>
> Thus the program of studies includes the curriculum, and may indeed furnish the material for the construction of an indefinite number of curriculums. The course of study is the unit, or element, from which both the program and the curriculum are constructed.
>
> These courses of study (in the different subjects, English, mathematics, etc.) constitute so many national norms, or units, out of which any school may make up as rich a program of studies as its means and facilities permit; a program, moreover, which may be made to yield several curriculums, or, possibly, almost as many curriculums as there are students, each curriculum perhaps being better than the others, from an individual point of view.[1]

The "course of study," then, as here used, means the course to be pursued in the teaching of any given study. It does not here stand for the collection of subjects taught in a given school; for that the phrase "program of studies" is substituted. Neither, be it noted, does it stand for the group of subjects studied by a

[1] *Proceedings of the National Educational Association*, 1899, pp. 670, 671.

particular student during his whole high-school career; for that is employed the term "curriculum."

It is proposed to treat in this paper of the formation of a "program of studies" for a high school, and the formation of a student's curriculum in a high school in which a certain program of studies has been adopted. Extended theoretical discussion will be studiously avoided and the subject treated throughout from the practical standpoint.

One important feature of this paper may be pointed out in advance. Most people will admit that expert educators know best both the subjects and the methods of treating them that would seem to be most truly serviceable to a given student. This does not mean a stereotyped "one course for all," since all *expert* educators take account nowadays of the student's individuality; but it does mean that after consultation with the student the expert educator is more likely than any one else, the unaided student himself included, to diagnose the student's case correctly and to prescribe the best curriculum for him. On the other hand, there is reason to believe that the student who has the responsibility of framing his own curriculum, and the consequent feeling that he is thereafter attempting to carry out some plan of his own, is likely to work much more earnestly, much more effectively, than the student who is forced to take a certain curriculum, however good, and allowed no choice whatever in the matter. But, it will be at once remarked, the curriculum which the student chooses will not be theoretically as good for him as that which the expert educator would prescribe for him. Undoubtedly it would seem so, and the matter, thus stated, apparently takes the form of a dilemma. That this need not really be so it will be one of the objects of this paper to point out, for it is believed that, under proper conditions, the advantages of both sides can be readily obtained.

PART I. THE PROGRAM OF STUDIES.

And now let us proceed with the formation of a program of studies for a given high school. Every school has its limitations which greatly restrict the number of different subjects that can

be taught in it. It becomes, therefore, a matter of selection to know what to leave out and what to include. The whole field of secondary studies must first be comprehended, and the definite lines marked out along which selection must proceed.

The following chart will make clear what the secondary studies are, and how they are related:

Main Groups		Supplementary
History	Language and Literature	Fine Arts
Ancient history, to 800 A. D. Mediæval and modern history English history U. S. history and civil government Economics	English and Foreign { Ancient / Modern Ancient { Latin / Greek Modern { French / German / Spanish	Drawing Painting Music
Natural Science	**Mathematics**	**Useful Arts**
Physical geography Physics Chemistry Biology { Botany / Zoölogy Physiology Geology and astronomy	Elem'y { Algebra / Arithmetic / Plane geometry Advanc'd { Plane trigonom'y / Solid geometry / Higher algebra	Mechanical drawing Bookkeeping Stenography Typewriting Manual training

Besides the "arts," we have here four main groups of studies, namely, those of history, language, and literature, natural science, and mathematics. History tells us of the relations of men, one with another, group with group, nation with nation; literature gives us individual expression on various phases of man and nature; while language deals with one of the means of expression, which are still further revealed by a careful study of the fine arts. Natural science, on the other hand, calls our attention to things external to man; these things are regarded quantitatively in the study of mathematics, which also forms one of man's chief guides in the useful arts. Upon closer study, it will be found that these groups admit of further division; thus, history may be divided into politics, economics, and civil government;

natural science into sciences, observational and experimental; and language and literature into two distinct subjects[1] with different pedagogical values. This will account for the slight differences[2] in grouping made by educational experts. But the idea and value of grouping remains, and it is undoubtedly one of the most valuable guides to all makers of curriculums.

It is to be noted that, although the Committee of Ten thus makes *five* groups, yet in its suggested programs and in much of its discussion it seems to work almost entirely on a four-group basis.

The following is the grouping of the school studies by the Committee of Fifteen:

1. Mathematics and physics.
2. Biology, as including the plant and the animal.
3. Literature and art, chiefly the study of literary works of art.
4. Grammar and the technical and scientific study of language.
5. History and the study of sociological, political, and social institutions.

The chart gives us a complete list of the subjects commonly taught in secondary schools. To comprehend the entire program, and to see each subject in its relation to the rest, is alone a study well worth while. Speaking on the subject of advisable correlations in school work, Mr. C. B. Gilbert, when superintendent of schools of St. Paul, Minn., said:

> No one can devote his energies first to comprehending and then to imparting the broad ideas implied in a truly correlated course of study without growing in breadth and power from the effort. . . . . The very act of

[1] Dr. Harris makes language and literature two distinct groups, and so divides the school studies into *five* co-ordinate groups. I have placed language and literature in one group, because they are in almost all high schools taught together. Still the distinction is, I believe, growing. Distinct classes in English composition are not uncommon in high schools.

[2] Compare the following list of subjects regarded as proper for secondary schools submitted by the Committee of Ten at the suggestion of the appointed "Conferences": (1) language — Latin, Greek, English, German, and French (and locally Spanish); (2) mathematics — algebra, geometry, trigonometry; (3) general history, and the intensive study of special epochs; (4) natural history — including descriptive astronomy, meteorology, botany, zoölogy, physiology, geology, and ethnology, most of which subjects may be conveniently grouped under the title of physical geography; and (5) physics and chemistry.

grasping and administering a broad and wisely correlated course of study is in itself a liberal education.[1]

It is not likely, however, that any single school in the country could offer so wide a range of subjects for its students to choose from as this chart reveals. The High School of St. Louis, Mo., it is true, includes them all except astronomy, geology, and manual training; it teaches in addition psychology, ethics, science, and history of education, and nature study. But with 62 teachers it has the exceptional enrolment of 2,092 students, and is both high school and normal school in one. Large schools, it is evident, can offer more subjects than small schools, but probably all must always omit some subjects, and it becomes at once a matter of great importance to decide which subjects shall be adopted into the program and to what extent, and which subjects shall be omitted from it. We shall therefore proceed to consider at some length the lines along which selection must take place, and for purposes of illustration shall take up the special consideration of California High schools, and of those pay special attention to the three-teacher schools, where the process of selection is most severe, and only the most important subjects can survive to find a place in the program of studies.

The considerations which will very largely determine the organizer in the selection of subjects for the "program of studies" may be stated as follows:

I. General considerations: (1) pedagogical; (2) physiological; (3) sociological; (4) æsthetic.

II. Particular considerations: (1) the state law; (2) university requirements; (3) majority preferences or local environment; (4) the number and special fitnesses of teachers employed; (5) the number of daily recitations advisable.

These controlling influences in the organization of our high schools are so important that they demand careful inquiry. Let us then consider them in turn.

I. PEDAGOGICAL CONSIDERATIONS.

1. *Regard for the different groups of studies.* — It would be aside from the purposes of this paper to take up the discussion of

[1] See *Proceedings of the National Educational Association, 1896*, pp. 299–307.

"formal discipline" which is here involved. Besides, that discussion has continued already so long in educational circles that certain definite results may be taken for granted. The man who said, "I don't care what a boy studies, so long as he studies *hard*," would find few sympathizers today. The new psychology may be considered to have established the necessity for different kinds of studies for the development of the different centers of the brain. For this purpose, and also that the mind of the student may be prepared to interpret and to profit by the varied experiences met with in his changing environment, the school studies have been appropriately grouped, and the principle laid down that all students should for the greater part of their school life take studies from all the groups. To use the words of the Report of the Committee of Fifteen, this is required by (1) the "symmetrical whole of studies in the world of human learning," and (2) "the psychological symmetry of the whole mind."[1]

2. *Election by the students should be possible within the groups.*— One of the most important of the educational reforms of recent years is that which emphasizes the necessity of *interest* on the part of the student in his work. To secure this in secondary schools, endeavors are made to include in the program not only subjects from all the groups, but also several subjects from each of the groups, in order to make it possible for the student to pursue within certain limits the studies he prefers. Thus, several foreign languages will be taught, where possible, in the schools not with a view to any one student's studying them all, but in order to suit the desires and needs of different students. If, however, the school is very small, few foreign languages can be taught, rarely more than two, and almost all students will therefore be compelled to take the same languages.

[1] For a clear, concise, and definite statement of reasons why one or more subjects from each of the main groups should be included in every curriculum, the reader is referred to an article by Dr. Harris, published in the *Proceedings of the National Educational Association* for 1896 (pp. 287–96) entitled "The Necessity for Five Co-ordinate Groups of Studies in the School." See also *Psychologic Foundations of Education*, by the same author. Chap. 36 in this book is devoted to the "Psychology of the Course of Study in Schools — Elementary, Secondary, and Higher," Sec. 208 of this chapter discusses "the five windows of the soul" or "five co-ordinate groups of studies." See also W. S. Sutton, "The Determining Factors of the Curriculum of the Secondary School," SCHOOL REVIEW, Vol. X (November, 1902), pp. 687–701.

3. *Sufficient time must be allotted each subject to enable it to yield its educational value.*—This was clearly set forth in the Report of the Committee of Ten, as follows:

> The committee believes that to establish just proportions between the several subjects, or groups of allied subjects, it is asserted that each principal subject shall be taught thoroughly and extensively, and therefore for an adequate number of periods a week on the school program . . . . If every subject studied at all is to be studied thoroughly and consecutively, every subject must receive an adequate time allotment. If every subject is to provide a substantial mental training, it must have a time allotment sufficient to produce that fruit. Finally, since selection must be exercised by or on behalf of the individual pupil, all the subjects between which choice is allowed should be approximately equivalent to each other in seriousness, dignity, and efficacy. Therefore they should have approximately equal time allotments. The Conferences have abundantly shown how every subject which they recommend can be made a serious subject of instruction, well fitted to train the pupil's powers of observation, expression, and reasoning. It remains for makers of school programs to give every subject the chance of developing a good training capacity by giving it an adequate time allotment.

When we come to discuss the making of curriculums and the arrangement of the school time-table, we shall need to take into account other pedagogical considerations, such as the order in which the subjects shall be studied and the number of subjects a student shall pursue at one time. The three pedagogic considerations, however, which mainly control the organizer's selection of subjects for the program of studies are those just given, namely: (1) regard for all the groups of studies; (2) selection, where convenient, of several subjects from each group in order to make election possible for the student, but not so many from any one group as to make the program lop-sided; and (3) allotment of sufficient time to each subject selected to enable it to yield that training which it is best fitted to yield. (N. B.—This means the omission of every subject that cannot be taught for a sufficient length of time.)

II. PHYSIOLOGICAL CONSIDERATIONS.

Educators are feeling more and more compelled to take account of the great difference wrought in our mode of life by the great change in industrial conditions during the last century. The population of the United States was in 1776 chiefly agricul-

tural; only one thirty-third part of the people lived in cities. Today one-third of our people live in cities, and of the other two-thirds many are suburbanized by the trolley-car. This means that our young people do not receive at home the manual training and physical development their grandfathers had, and it becomes incumbent on the schools, at least in certain localities, to provide work that will develop more fully the motor side of the students. Hence the importance of the useful arts. They supply a real need, and are worth all the time and money they require, since they help to develop sound bodies for sane minds, and, adding a greater interest to the school, undoubtedly improve its discipline.[1] The useful arts, moreover, attract many to the high school for further training who would otherwise discontinue their efforts for an education. Kansas City in a very few years doubled its high-school attendance by the establishment of a manual-training high school for boys and girls.[2] All of which is perfectly natural, for physiological conditions are fundamental, and, combined with industrial needs, make demands we cannot with impunity neglect.

III. SOCIOLOGICAL CONSIDERATIONS.

President Butler in his address entitled "Is There a New Education?" says: "What, for lack of a better term, I call the sociological aspect of education, is in many respects the most important of all."

"And of late," says another writer, "the old institutional conception of education may be said to contend with the newer theory of individualism. But out of the clash of these two conflicting notions an ideal seems now to be rising, truer than either —*the ideal of social individualism.*"[3]

In making his selection for the program of studies, the organizer must indeed ask himself whether the curriculums rendered possible by it will be such as to prepare the students, adopting

[1] See CHARLES DEGARMO, *Interest and Education*, especially chap. vii, entitled "Interest, Motor Training, and The Modern City Child." (New York: The Macmillan Co., 1902.)

[2] *U. S. Report of Education*, 1899-1900, p. 1373.

[3] H. M. SCOTT, *Organic Education*, p. 18.

them for life in the world which now is and which they will soon enter. And here it needs to be constantly iterated that the world they will enter is not the world of two thousand years ago, nor is it the world of a hundred years ago, when there were no railroads, no steamboats, few factories, and no electrical appliances. Therefore with President Butler[1] we may say: "The first question to be asked of any course of study is: Does it lead to a knowledge of our contemporary civilization? If not, it is neither efficient nor liberal."

IV. ÆSTHETIC CONSIDERATIONS.

Involved, as we are, in so many problems of an executive nature, there is danger of our forgetting that we are planning for the education of individuals at their most emotional stage. Discussing the characteristics of adolescence, President G. Stanley Hall[2] reminds us that the youth has

> nameless longings for what is far, remote, strange; which [fact] emphasizes the self-estrangement Hegel so well describes, and which marks the normal use of the presentiment of something higher than self. Girls now grow more conscientious and inward, and begin to feel their music, reading, religion, painting, etc., and to realize the bearing of these upon their adult life. There is often a strong instinct of devotion and self-sacrifice toward some, perhaps almost any, object or in almost any cause which circumstances may present.

Shall the school ignore these, the real things, in adolescent life, and drive on coldly in the old scholastic ruts? Cannot these "nameless longings" be used to lead to lofty ideals and noble aspirations that shall not only carry the youth over the stormy period of adolescence, but afford him inspiration and enthusiasm all along life's way? The "Overture" to *Tannhäuser* and the "Pilgrim Chorus" have been a source of moral energy to me and many boys. I sometimes think it would be well worth while if students once a week could listen to the clarion notes of the cornets and trombones in the *Tannhäuser* "Overture," proclaiming defiance in no uncertain tones to the temptations of the flesh represented by the soul-bewildering, mind-entrancing, will-weakening strains of the tremulous violins. Saul summoned

[1] N. M. BUTLER, *The Meaning of Education, and other Essays*, p. 91.

[2] See G. STANLEY HALL, "The Moral and Religious Training of Children and Adolescents," *Pedagogical Seminary*, Vol. I, pp. 196–210.

David to charm away his nightmare with the harp; may we not summon music to give us victory over passion, develop in us living springs of moral energy, enable us to "withstand, and, having done all, still to stand"?

Again, who can overestimate the moral staying-power afforded by such pictures as Millet's "Angelus," Sant's "The Soul's Awakening," and Ferruzzi's "Madonna"? Truly, temptations lose their power when these possess us, and at such times we look with scorn and loathing on the miserable things that would drag us in the mire.

I wish, therefore, to take this opportunity to suggest that the æsthetic side of education should not be neglected in our schools. I occasionally hear a boy humming over strains from an oratorio or from one of Wagner's soul-stirring operas, and I know every time the lofty character that boy has; equally indicative are the pictures on the walls of his room. But for every boy of this kind I can find several who care only for "Tootsey-Wootsey," or some ribald catch equally hideous, and who adorn the walls of their rooms with all manner of demoralizing advertisements.

The literary, the scientific, the motor sides of the educational problem have been abundantly emphasized; it is now time to emphasize the æsthetic, to cultivate good taste, to culture the heart, to purify the emotions. "What shall it profit a man if he gain the whole world and lose his *soul?*" And this does not need to refer to his soul in any other world than this. The newspapers teem with accounts of men who have gained all of this world that they can possibly use, and more, but who, having in the process lost all sense for art, for music, for refinement, and for culture, are miserable in the extreme.

Let us develop the æsthetic side of our high-school students.[1]

HERBERT LEE.

[1] For a very interesting account of what has been done and for suggestions as to what might be done in high-school æsthetics, see Bulletin 16 (March, 1902), High School Department of the University of the State of New York, pp. 403–28, included in the *Ninth Annual Report of the High School Department* of the said University.

[*To be continued.*]

THE RURAL PUBLIC HIGH SCHOOL IN THE SOUTH.

PROFESSOR PAUL H. SAUNDERS, of the University of Mississippi, in an address last year before the Association of Colleges and Preparatory Schools of the Southern States, on "The Outlook of the Public High School in the South"[1] spoke of the valuable assistance of the colleges, universities, and teachers' associations in separating the high-school work from that of the higher institutions, in outlining and in having adopted a uniform course of study, in giving some supervision to the work, and in stimulating them to do all the work necessary for entrance into the freshman class. The high schools in the different southern states to which he refers are located principally in the cities and larger towns. It is the purpose of this paper to discuss the public high school in the rural communities, and what provisions have been made by the southern states for their establishment.

When we speak of the city high schools, we may refer to them as a system of schools, each with competent supervision furnishing a well-graded course of study; but when we speak of the rural high schools in the South, where 80 per cent. of the people live, we must refer to them as a series of schools, each stretching its course of study in order to make the instruction cover that period of time and limited space—the four years between the common school and the college; and it is customary to style whatsoever instruction is given within this period of four years as high-school work. In every state in the South there are many rural public high schools, but in a large number of these there is no direction of the forces that are trying to furnish a course of instruction covering this period of four years; in a large number it is left to the whims of the parent, the prejudices of the committeemen, and the imagination of inexperienced teachers. Away back in some remote rural district we find communities that are wide-awake to the necessity of better education; they have voted an extra tax on themselves—and this is the most pitiable phase

[1] See SCHOOL REVIEW, February, 1903.

of the whole question—trying to solve the problem in their simple, honest way, with absolutely nothing to guide them but the example of some former teacher, or the college-entrance requirements as outlined in the various catalogues. This is not the case in all the southern states, but it is the condition that reigns with supreme modesty and general contentedness in a large number. It requires, on an average, about sixteen years to complete the school and college course. The first seven years are clearly defined; the last four years are clearly defined; but between the two we find four years of interregnum in which time the imagination of the teacher may run riot, inject anything under the sun that is not offensive to the patrons, or omit whatever his or her lagging spirit finds undesirable. There is no one within reach to guide him, no one above him to whom he is responsible; and this in a period that is to train the rising generation for intelligent citizenship. A failure here means a relapse into blissful ignorance and humble contentedness, convincing the majority that so much education is a useless luxury, and that success depends after all upon whether a boy has any "stuff" in him or not.

When the public-school term is only four or five months in the year, high-school work is out of the question; for it requires about six or seven years to complete the common-school branches, when the length of the term is eight or nine months. Divide the length of the term by two, and we must double the number of years, even admitting that the students will begin this session where they stopped last session. When the student enters at six, it will require about fourteen years to complete the common-school course, and by that time he will have passed out of school. Thus, in discussing the rural high school in the South, we are discussing a situation years before thousands of districts in this and other southern states are within even speaking distance. The average length in Missouri and Maryland is nearly seven and one-half months; in Texas and Mississippi, five and one-half months; in Virginia and Louisiana, six months; in Georgia, a fraction over five and one-half months; in Tennessee five months. The average length for all the other five

southern states falls under five months, making the total average for all southern states four and nine-tenths months (according to the reports of 1901–2).

These figures tell only a part of the story. In many districts the school term is under even three months, while in others it is ten months. This is true in every southern state. Then, what high-school instruction is given is found in isolated districts or in a few wealthy counties. Each high school is practically a law unto itself, and the supreme authority in nearly all the southern states cannot put his fingers upon a single public high school and define the course of instruction. In a large measure, the work is launched forth with only a vague purpose, unmindful of the fuller life that should be the result of this four years' training; and I believe the success of the present educational movement will depend eventually upon the success of the high school; for it must shape the life of the student into a well-directed channel, or fail in its purpose. Then it means the evolution of the high school from the elementary school, which will require more time and more money. Several states have outlined a course of study, the same course to fit a three-month school and nine-month school. The same course supposes an equal work from a three-month term and a nine-month term; and to send such a course out without sending someone to adapt it to the length of term and local conditions is like sending a cargo of provisions to a starving people without a responsible person in charge. It may reach its destination and it may not.

A circular letter was addressed to the superintendents of the different southern states, asking for this information:

1. How many rural public schools in your state teach the high-school branches?

The answer to this question gives the best insight into the actual status of the high school, or as to what is known in regard to the high-school instruction given in the rural public schools. One state gives twenty-five as the whole number; another gives fifty; another says it is impossible to tell—in some counties possibly 10 per cent. of the schools give some instruction in the high-school branches, while in other counties there is not even

the semblance of a high-school; another answered that many of the schools teach one or two branches, but it is impossible to tell to what extent, and what branches. This, then, is the situation: In a whole commonwealth there are twenty-five schools out of about five thousand schools that furnish instruction in the high-school branches; or in a whole commonwealth it is not known to what extent high-school instruction is given, even if it is given at all.

2. Do you favor one course of study for the city high school, and another for the rural high school?

The answers to this question were almost unanimous in favor of one general course for all, but some advocated two courses.

3. Is the public school ever taught in connection with the private high school? If so, is the high-school instruction given free while the public school is in session?

In some of the states the public and private schools have no connection; in some they are taught together, but the instruction in the high-school department is open only to those who can pay the tuition; while in others the two are taught together, and during the public term instruction in each department is free to all the children in the district.

The other questions asked were concerning state aid and state supervision.

The whole energy in the South has been directed toward raising the common schools to the high schools. County supervision goes so far and no farther; the course of study reaches so high and no higher, with the exceptions that I shall mention later; and when we take into consideration that the average length of school term for all the southern states is four and nine-tenths months, we can see at a glance that when the average child reaches the high-school department, he has reached his majority; hence he is beyond the public school.

One idea, though, that has grown rapidly in the South within the past few years is the duty of the community to provide for the moral and intellectual development of all the children in the community; or, in other words, local taxation, because the public-school fund in three-fourths of the southern states is

insufficient to provide for even a well-classified system of common schools. Then the hope of the rural high school (except in wealthy counties) is in local taxation or state aid, and in many districts it will require both.

The number of local-tax districts in the southern states is as follows: Texas, 232 (cities and rural); Missouri, 600; Florida, 500; Alabama, none—constitution amended so they can adopt local tax of thirty cents on one hundred dollars' valuation; Mississippi, 90 towns and 24 counties; Virginia, every school district—one-half of school fund is raised by local taxation; West Virginia, a few; Arkansas, all; South Carolina, 235; Maryland, none (public-school fund sufficient); Georgia, 91; North Carolina, 174; Louisiana, several.

This is an excellent basis upon which to build up a system of high schools, for the foundation will be eternal if the work touches the vital interest of the community. But this is not always the case, and through whatsoever avenue we lead up to this subject, we come face to face with this fact that after we pass the common school information on the subject is most meager, knowledge is vague and uncertain, and the approach to a solution is made with fear and trembling. Hence the communities are left to solve the problem alone, each in its own way with little help to guide them.

But some of the southern states are giving close attention to the rural high school. The state superintendent of Mississippi writes: "I shall ask for some important legislation along the line of rural high schools, when our legislature meets next January." This idea has reached its highest development in Florida, and the high-school law recently enacted in that state will compare favorably with any in America. It provides for a uniform system of schools embracing twelve years; the last four to be called the high school. I quote from the law:

> A high school which shall maintain only the first two or junior grades, prescribed in the official course of study for high schools, shall receive $360 per annum for three years; and any high school maintaining all four, junior and senior high-school grades, as prescribed by the state course of study for high schools, shall receive $600 per annum for three years.

Sec. 11 has the following provision for the rural schools:

> Any public school which shall be maintained not less than three miles distant from any town or city of more than five hundred inhabitants, which shall be supported by public-school funds and controlled by county board of public instruction, which shall provide all instruction of a character prescribed by law for primary, intermediate, and grammar grades during not less than eight months of each year, and which shall be conducted by two or more qualified teachers in a suitable building and which shall have necessary furniture and equipment, shall receive from the state treasury $200 per annum for four years.

Another section provides that

> A committee of not less than six nor more than ten — one-third to be principals or presidents of state institutions, and one-third principals of high or graded schools — together with the state superintendent shall prepare a standard course of study for high-school grades. Said course shall prescribe minimum requirements only.

The original bill, as it was introduced, contained a clause providing for a high-school inspector, but somewhere during its slow journey from the committee rooms to the enrolling clerk, this clause, unable to keep up with the procession, went the way of all things mortal.

On July 28 the committee appointed to prepare a course of study met at the state capital and outlined an "Advisory Course of Study for Rural Graded Schools." This has been published in a neat pamphlet of fifty pages and contains, besides, "The Regulations of the State Board of Education Regarding High Schools and Rural Graded Schools Receiving Aid Under Provisions of This Law." Aid will not be granted any school until the county board of education shall have appropriated for such school an amount which will, with the state aid applied for, maintain the school for eight months or more. In the course of study special attention is directed to the study of agriculture, manual training, and domestic science. This law was enacted this past spring, and of course it is too early to ask for reports; but it is the strongest legislation yet enacted in the South, and it is safe to say, in the language of the state superintendent of Wisconsin, in which state a similar law was enacted over ten years ago: "The practical results of such a system is its best vindication."

In Maryland and Missouri, where the length of the school term averages nearly seven and one-half months, we find some attention paid to the high school. Both have laws relative to the same. In Maryland, whenever any election district shall present a building to the board of county school commissioners, it shall be their duty to accept the same and provide for the maintenance of a high school out of the general fund. But here is the strongest feature of the law:

> Each high school shall be visited and examined annually by the principal of the state normal, or a professor thereof; such high school shall be also visited at least once in each school term by the county examiner, who shall report quarterly to the board of county school commissioners the result of his observation.

The high-school law in Missouri is as follows:

> If one district will provide buildings, etc., and three or more other districts will unite with this one to establish a central high school, the directors of the several school districts may set apart 20 per cent. of the school fund for the support of the high school, and the length of school term shall not exceed the average length of the term in the several districts.

This law was enacted eight years ago, and only one high school has been established under its provisions. The state superintendent favors instead the consolidation of three or more districts into one for all school purposes.

The joint high school is the law in Texas. Here the state superintendent says it should work well, and especially in thinly-settled districts; "and it is a significant explanation," he says, "to point out why it is that concentration of the older pupils has not been regularly practiced under such favorable conditions." The chief reason given is a lack of organization, which doubtless is the result of a lack of competent supervision.

In Tennessee and Arkansas the law varies still more. Here the county court shall have power to provide for establishing and maintaining one or more county high schools. In Tennessee the court shall have power to levy fifteen cents, and to make appropriation out of the county fund not otherwise appropriated. This to be a special fund known as the "high-school fund." The school shall be under the management and control of the county

board of education, which may prescribe a course of study "necessary to prepare pupils for college or for business."

In Arkansas the county court has the power, and it is also obligatory, to provide high schools, where instruction shall be given in such studies as may not be provided for in the primary grades.

We have considered three kinds of high schools: the district, the consolidated district, and the county. Our territory broadens. In Alabama we have the agricultural high school in each of the nine congressional districts. For the support of these, which were established in 1896, the legislature appropriated $2,500 a year to each school, which is supplemented by local funds. These schools have been a combination of elementary and high school, in which a general education has been given, with a limited amount of instruction in agriculture. Farms are connected with the school, on which, in some cases, simple field experiments have been conducted. Over two thousand boys and girls attend these schools annually. There is a similar law in Louisiana. The state superintendent reports two schools established and maintained with much success. In addition to the agricultural school, a law was enacted in 1894 in Louisiana giving the parish school board authority to establish central or high schools, when necessary.

There is still another class of high schools semi-public in their nature. These are known as the "chartered high schools," and are found in Mississippi and Georgia. In the former state the chartered high school is under the control of an association which becomes responsible for its support. In some a tuition fee is charged, while in others the association raises the necessary funds and the school is free. The state superintendent says: "I have organized a large number of these schools, but they are not satisfactory. The best is a school supported by local taxation."

These are the southern states that have made some legal provision for high schools; yet the law has not carried enough life with it. Something is lacking yet. South Carolina has no high-school law, yet there are 75 cities and towns and 160 rural

districts that supplement the school fund by local taxation, and these, it is to be presumed, all furnish some instruction in the high-school branches. The state superintendent says, however, "there is not even the beginning of a high school in some counties, and we have reached a time when counties have developed a sentiment in favor of providing high-school education." He recommends that the county board of education be authorized to set apart 10 per cent. of the county fund to use in its discretion—to go to the establishment of high schools in some counties, to go to the teachers' fund in others. In Virginia every school district, town or city, receives some local aid by taxation. About one-half the school fund is raised in this manner, and it is left with the district, town, or county to arrange for high-school instruction.

In North Carolina we find no law pertaining to general high-school work. There are 174 local-tax districts in this state, and over 125 are in the rural districts or small towns of less than 500 inhabitants; and all these are trying to prepare students for college. In addition to these, the following counties maintain their schools for six months or more: in Durham county the average length is eight months; in New Hanover, about seven months; in Edgecombe, about seven months; in Halifax, about six months; and in Buncombe county, six months. Probably the best system of schools in North Carolina is in Durham county, where the term is eight months; and the success of these schools is the best evidence that the high school is the evolution of a good system of common schools. Superintendent C. W. Massey, in writing of the growth of the high school in Durham county, says:

> I wish to say that several years ago we discovered the necessity for high-school work, and at once began to urge upon the school committee the necessity of employing teachers competent to do this work. At the same time, we commenced urging upon the people the benefits to be derived from a more thorough teaching of the public-school course, and a reasonable extension of that course of study. We realized that it would require time to prepare the people and the pupils for high-school work. The first year we had only about a half-dozen in the county taking high-school studies. We now have over two hundred such pupils, and the number increases each year. Instead of

having high-school work done in all the schools, we hope to establish about eight such schools, located at central points in the county. Five of these have already been located. It will require time and much hard work to accomplish what we have set out to do, but, with an average school term of eight months a year and a faithful corps of well-trained teachers, we fail to see why such a system of schools should fail.

Thus we see, wherever the common-school term is reasonably long, the advancement of the student under good supervision makes it necessary to provide more instruction than is contained in the common-school course, and where it is provided it grows in popularity and becomes a necessity.

There is another class of public high schools in North Carolina, somewhat similar to the chartered high school in Mississippi; and these have been greatly increased within the last two years, owing to a decision of State Superintendent Joyner that all private high schools taught in connection with the public school, or rather using the public money, shall give free tuition in every department to all the children in the district so long as the public money lasts. Many such schools have been converted into public schools supported by voluntary subscription for eight or nine months free to all the children in the district.

Nearly every southern state has a few institutions classed as high schools that are supported by state aid or by large endowments. They may be agricultural schools or secondary normal schools, yet they are doing high-school work, and receive both state and local support. North Carolina has two such institutions. The Cullowhee High School, in Madison county, receives $2,000 annually in order to support a normal department. The last legislature established the Appalachian Training School, appropriating annually for its support $2,000; "that tuition in said institution shall be free to all persons in the state who shall sign a pledge to teach in the public schools of North Carolina for a term of not less than two years." The possible good that could result from these schools can hardly be estimated; but if they had been confined to a few counties, and the state appropriation had been dependent upon the amount that the counties should raise, and all students coming from other counties compelled to pay their tuition, the institution would have become

the property of the counties, and would have confined its work to these counties, instead of trying to catalogue students from every state in the Union and possibly from the South Sea islands. The work of the public high school should be confined to specific territory, in order that the entire energy may be expended in developing the children within that territory.

As I comprehend this heterogeneous mass of school, in which you can find any type from the well-organized and highly-developed to the insignificant pretense which is barely worthy of the name of school, there comes before me a picture of another heterogeneous mass, drawn by Matthew Arnold, who served as the inspector of schools in England for thirty-five years. By comparing the system in Manchester with that of London; by holding up to public gaze the filthy, crowded condition in places; by pointing to the deadness and ghastly dryness of certain parts of the educational system; by going from school to school and in his sweet, simple way pointing out the defects, and leaving in every room tangible suggestions, the fruits of observation and comparison, as the bee carries pollen from flower to flower, so Matthew Arnold carried light and life into every schoolroom, and brought order out of chaos. There is a similar work to be done in the South. All these isolated forces should be organized into one system, and in order to do this there must be direct observation, comparison, and supervision. Maryland is the only southern state that provides for special supervision, but I question the advisability of delegating this work to any particular institution.

In the discussion of the rural high school there is one other feature to consider: What shall be taught? What shall be the scope of its work? Much has been written and much has been spoken on this question. It is the history of education that whenever there has been any innovation the necessity of the times demanded it. We know this to be the case in the establishment of the first technical or industrial school; we know this to be the case in the establishment of the different normals; and there is little doubt now but that the necessity of the times demand that the course be enriched or changed; and it is being enriched.

Yet we must remember the fact that the world owes much to pure scholarship; that, while pure scholarship does not feed the world, neither does industrialism guide the great hidden forces of the world; that one is as powerful as the other. The one is the spiritual, the other the material. Whatsoever the course of study is, the instruction should be that "in which the subject taught is secondary to the manner of teaching; in which the task done is subsidiary to the effect of doing it." And the question is ever recurring, it will not down: What shall be taught to the children of the rural districts within this period of four years? Dr. William T. Harris is wedded to the belief that the study of Latin and Greek should not be diminished. Dr. G. Stanley Hall, of Clark University, says that the attention given to these subjects, "in view of the growing claims and growing neglect of modern subjects, is calamitous to the point of pathos." Dr. Harris finds in the increased attention paid to the ancient languages—an increase from 34 per cent. in 1890 to 50 per cent. in 1900—cause for some rejoicing; while Dr. Hall looks upon much of it as "educational waste and devastation." Yet, while we have this discussion as to what are the most important branches, and while the difference has gone far beyond the point of reconciliation it seems still that there is a universal sentiment that the training given in the rural high school is very inadequate to the needs of the community. Systematic education can fashion men into almost any shape; and the different communities trust this, believe this, with a simple yet sublime faith; yet there is not a state in the union, so far as I am able to learn, that has a systematic course of study which you can point to and say "that system is adequate to the needs of the rural districts." Even the state of Massachusetts says through her secretary: "Our system of schools is excellent, but the course of study is open to attack." The course of study should be sufficiently broad and sufficiently enriched so that when a student leaves the high school, which is justly called the people's college, for a higher institution, the development of his latent possibilities should have taken that inclination that points to his future career. We find students blundering along through a classical course who ought to be in a technical or

agricultural school, and *vice versa*. These misfits would not occur so often if the training had been sufficiently broad.

In every section of the country we find states making experiments, notably Illinois, Iowa, Minnesota, Wisconsin, Alabama, and Louisiana. Nearly every southern state is making an effort to have agriculture taught in the public schools, but the secretary of agriculture believes this subject should be taught, not in the common or elementary schools, but in the high schools.

The most satisfactory work yet undertaken on this continent in the direction of systematizing the various endeavors aiming at any improvement of the efficiency of public instruction in rural districts on a large scale, is in Canada.[1] In addition to the consolidation of small schools and the transportation of pupils to central institutions, there has been laid out a plan for supplying practical courses in scientific agriculture to communities that may be benefited by them. Two or three acres of land are to be provided for the purpose, adjacent to the most important school in seven districts in each county. A garden center is also to be formed. The county council will then engage graduates of the agricultural college to serve as traveling instructors. Upon the day appointed for the visit of the instructor, the boys from the seven schools in the districts will meet at the central school to be taught the elements of forestry, horticulture, entomology and its relation to agriculture and horticulture and the physics and chemistry of the soil. The instruction will be solidly practical. Each pupil will come in close contact with the actual work. The plan is to have the instructors visit one district a day, and thus cover each county in a week. The different schools will be permitted to exhibit the results of their work at the county fairs, and prizes will be donated to the schools making the best showing. For the benefit of the girls, a course in household economics has been arranged, in every way as practical as the agricultural instruction; and there will be a similar combination of schools with one common training center.

The purpose of this paper was to give the status of the high

[1] This is taken from the July number of the *Forum*.

school of the South. While there are many ways of establishing such schools, still almost their only difference is that of quantity, and after viewing the situation we come back to our starting-point: What can be done to organize this period of four years and put more life into it? What can be done to enrich the course of instruction so that it will meet the needs of the rural districts?

EUGENE C. BROOKS.

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TENDENCIES AS TO THE ENLARGEMENT OF THE SECONDARY FIELD.

ALL fields are enlarging, and of course secondary education is no exception to the rule. We are getting nearly three times as much steam power from a pound of coal as we did half a century ago. We are also obtaining nearly three times as much result from the same mental effort as we did then. A boy was then put to learning a dozen pages of Latin grammar in advance of any actual use for either rule or exception. Today, with the aid of machinery, the workman can make in three hours a day all the absolutely necessary things of life — in fact, more than he could have produced by working all his time a century ago. Today, with skilled teachers, who know how to quicken intellect with sympathy, how to join facts together with hoops of logical steel, how to avoid the waste of marking time and of mere unintellectual repetition that adds nothing, we can accomplish in one-third the time all that we achieved half a century ago. Just as the workmen go out into new fields to employ their added increment of time, so the secondary school must enlarge its field of operation to use up the time gained. The secondary school has already enlarged so much, due to the pressure of the colleges without and to its own needs within, that it feels that it requires more time than it has at its disposal.

The grades, however, are so much better taught than they were half a century ago that they spend a part of the time thus gained in marking time, in the mere mechanics of repetition that does not instruct, and in advancing into jungles that might better be left for high-school exploration. The secondary school wants at least one, and perhaps two, years of this time. The secondary school would like to begin two years earlier to teach such subjects as Latin, the modern languages, and the relation of common things, sometimes known as science. Instruction in these branches without a skilled specialist is a hundredfold more

damaging than no instruction. The secondary school alone can afford such specialists.

Some would say that the subject of this discussion is a misnomer; that we cannot speak of enlarging primary, or secondary, or college, or university education; that, since education is a continuous process, each step depending on foregoing steps, we can speak only of enlarging education. Probably no one who has given the subject any thought doubts the continuity of education. Probably no one not entangled in metaphysical argument would contend that there is no difference between primary and university education. It is true that water goes through a continuous orderly process to become ice, and even then it does not change its essential nature, but you and I would hardly care to trust ourselves to any captain of an Atlantic liner who in the vicinity of icebergs paid too much attention to arguments about the essential unity of water. We should expect such a captain to wreck his vessel. Those who introduce primary methods and discipline into a high school will wreck the school.

Mr. Stratton D. Brooks, in his discussion of the reasons for withdrawing from school, shows that some pupils in the upper grades leave because they require different treatment from younger pupils. He emphasizes the fact that high-school ideals and management should differ from those of the grades. Commenting on cases where they do not, he says—and I quote him word for word: "This accounts for the fact that grade teachers when transferred to high-school work almost always fail." I myself believe that grade teachers frequently succeed, but only in cases where they have the power of adapting themselves to the changed needs of the high-school pupils. Secondary schools need enlarged ideals, more freedom, and methods that drop the plummet deeper. Dispose of your apron-strings faster and faster as you advance in the seventh grade, is sound advice in the economics of education. I hope to live to hear more high-school economists say: "There's husbandry in my school. My stock of apron-strings is nearly all closed out."

This paper intentionally leaves to those that follow the exact statement of enlarged secondary programs. It endeavors to

indicate some general ways in which secondary education must be enlarged, if it is to fit for life.

The secondary school must be so enlarged as to give more scope to probable reasoning, as opposed to mathematical reasoning. Few things in life are certain except death and taxes. One reason why the farm proved such a magnificent school for our ancestors was because it gave them so much practice in probable reasoning. This type of reasoning is the one always employed to deal with new and untried emergencies, with changing conditions; in fact with the vast majority of issues that confront us in life. A country youth one March night hitched his horse to an old buggy and started to see his sweetheart. In the darkness he drove into a mudhole. The whiffle-tree began to crack when he urged the horse forward. Another pull and it would break. He would then have to get out in the mud, ruin the polish on his shoes, and be compelled to return home. With hardly a second's hesitation, he seized the ends of the whiffle-tree, and with his own muscular arms he relieved the strain, as he called "Go-long" to the horse. The buggy came out all right. That country boy deserved his girl, and we hope that he won her. The city boy has received from athletics, and from dealing with his fellows on the playground, his best training in probable reasoning.

When a farmer plants a crop, or when a business man makes an investment, he can look at the end of no arithmetic to find out his certain profit. No teacher can give a mathematical answer to the question: "What degree of success will my pupils have reached five years after graduation?" Life never points to more than probable success. In school the tyranny of mathematics has been as great as that of the classics. President Eliot has complained that from one-sixth to one-third of the whole time of American children is given to arithmetic, and he has impeached it because, as he says, "it has nothing to do with observing correctly, or with recording accurately the results of observation, or with collating facts and drawing just inferences therefrom, or with expressing clearly and forcibly logical thought."

Much of the mathematical reasoning taught in our high shools, as well as in our grammar schools, is necessary for experts only. It has not the excuse of affording exercises in the probable reasoning necessary to deal with the changing conditions of life. In developing rule-of-thumb reasoners our schools have already done fairly good work.

There cannot be the usual uniformity in courses that are best for developing probable reasoning. Those ages which advanced the world the most were the least uniform. The world took a mighty stride ahead in Elizabethan times, but there was less uniformity in belief and action than in the preceding reigns. When Drake met the Spanish armada, he fought against captains of whom Philip of Spain had required absolute submission and sameness of opinion in all matters pertaining to church and state. This uniformity had produced an uninventive frame of mind. The individuality and skill of the English won the battle for them in spite of the small size of their ships. If scientific investigation of the nineteenth century has proved any one thing, it is that progress comes only from those who vary from the common type.

The secondary course must be so enlarged that no one pupil can take it all. Life is so complex that no one person can live it in all its phases. All of us are constrained to omit something that we should like to do. As the pupil grows older and has mastered those foundation studies on which advancement in all depends, he should be given increasing opportunity to select studies in terms of his own individuality. Division of labor has added so much to life because it has allowed individuals to be classified according to their capacity and natural tastes. Foreigners have said that the success of American manufacturers is largely due to their "scrap heaps" on which they throw an old machine as soon as a better one appears. Optional courses may serve as a stepping-stone to relegating to the "scrap heap" many unnecessary branches and inferior teachers.

The tendency towards secondary enlargement has been felt for a long time. The English course has been so enlarged and improved during the past twenty years that we are justified in

saying that a new English course has been added. During this period manual training has been introduced. Right here critics are saying that this tendency to enlargement results in expensive mistakes; that it fails to hold pupils in school as well as the older régime. They are quoting, in answer to those who claim that manual training enlargement would furnish the secondary bliss for which we sighed, the testimony of one of the great superintendents of the country, who at the superintendents' meeting in February, 1903, said: "With the largest city manual-training school in this country, after several years of experience, we have found thus far that it neither holds pupils in school so well as do the other high schools, nor do they pursue their studies so persistently; that is, they do not stick to what they start in with so continuously in mathematics, Latin, German, French, English and natural science."

The trouble here is not with the manual-training enlargement, but with the fact that much of it is put in the wrong place. In manual training many schools have reversed the correct order of things; for the young child should be busy getting control of his body. Later, at high-school age, it is the proper time for him to lay the main stress on getting control of the field of ideas. He has a sort of blind consciousness of what should be his work in the high school, and if he is too much diverted from this end, he grows uneasy and leaves. Much of the manual-training work given is fit only for the grades. The fact that a mistake has been made is not in itself an argument against secondary enlargement. But before we proceed further, we ought to feel that additions to the secondary course are not to be made on mere theory. The chances of mistakes are many. We cannot recall the youth of our pupils to remedy those mistakes. It is the business of educational organizations to recommend a change only after careful deliberation. But our hesitation must not be so pronounced as to preclude growth. The enlarged English course is of itself sufficient to justify attendance at the secondary schools.

We come now to the point of transcendent importance. Secondary education stands most in need of enlargement on its

moral side, in its aims and ideals. How shall the high school fit its pupils better for life? is a question often asked. Even its friends would hardly contend that vast improvement is not necessary in this direction. To fit for life requires two things. The first essential is ready adaptation to varying needs and emergencies. This is the intellectual element, and progress in this direction has been more marked than in the second requisite, which is moral development. Of course, the intellectual cannot be entirely divorced from the moral. But intellectual progress for the past fifty years has been much more pronounced than moral development. The secondary school has not played the part in moral advancement that the nation has a right to demand. There must be enlargement along moral lines. The high-school graduate must be so fashioned that he can become his own master at the day of graduation. He must order intelligently the use of his own spare time. This is as important as to harness Niagra's waters. He must have sufficient power of moral resistance to enable him to walk by the gambling house, to avoid spirituous liquors, to spurn "get-rich-quick" methods, to battle for civic and social righteousness, to be content to stand entirely alone during some of life's bitter hours, not joining the crowd to deny the right ere the cock has crowed thrice.

Is it true that an old Grecian stoic would notice that almost all our high-school examinations are examinations of the intellect, in so far as it is in our power to make them so? If this is true, it is a severe impeachment. Can knowledge without character ever furnish maximum results to either the individual or the world, no matter whether it is knowledge of bookkeeping, of how to run a bank, or of a city government? Moral backbone alone will secure a hundredfold yield from individual, social and commercial life. If the high-school graduate continues his intellectual development on the right plane, it will be because moral development furnishes the incentive. Character will apply the spur, and the individual will, like Milton, feel that he is ever in his great Taskmaster's eye. We can train our pupils to say: "What matter if the winter is long at Valley Forge; if the opposing forces are strong; if the craven calls in our ear to sign a truce;

if the enemy offers us bribes? You need never doubt us. There are no Arnolds here. We have been chosen to perpetuate this republic, to tend its hearth fires, and keep them brightly burning."

I would not have the high school pay less attention to the things of intellect, but I would have it heed more that moral development which should be as all-enveloping as the summer air and sunshine which enwrap the earth and ripen fruit and grain. Every time that teachers aid a pupil in doing something for another, and in recognizing that all commerce is based on doing something for others; every time they aid him in inhibiting the expression of an undesirable emotion, in repressing the tendency to waste his time when left to himself, in suppressing an inclination toward irregularity, in reacting rightly toward the small duties of life; every time they teach him to form intelligent moral judgments on the acts of his classmates, teachers, the citizens and public officials of his town; every time they cause him to feel deeper sympathy with others from noticing his own lack of perfection; every time they give him a glimpse of the laws of life and show him that anything immoral is necessarily in immutable conflict with them; every time they lead him to recognize the fact that he himself naturally dislikes what is wrong in others, and, as they teach, call to their aid the force of human gravity toward what is joyous and noble and self-sacrificing and divine, by throwing on the screen of school life a well ordered change of pictures embodying such traits; every time the teachers recognize that they themselves must be the fountain whence the moral waters flow and that the pupils of an enthusiastic moral teacher, moral every time in small things as well as in great, will themselves as naturally tend to be moral as the buds tend to unfold when the warm spring sun shines; every time that education advances on lines like these, it is enlarging in the noblest sense. I think that the tendency in this direction is today the most pronounced of all.

No matter if the intellectual element apparently lags behind, time must be taken to secure more certain moral results and to

add to the world of self-governing republics every graduate of the secondary school. Those graduates who have had developed in them moral sinews of steel are already fitted to grapple with the most of life's emergencies.

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FACTS AND FICTIONS CONCERNING EDUCATIONAL VALUES.[1]

An American once asked a Chinaman why the Chinese always built pagodas fourteen stories high. The reply was: "That is the way to build a pagoda." Very similar is the reason frequently given as to why a course of study should contain certain subjects and only these. The curriculum is modeled upon traditional patterns, and the assumption is made that that is the proper way to have them. What has been long in a course receives traditional approval, and it becomes assumed that each particular branch has some special value. Should the question be raised as to why a given study is in the curriculum, or why recommended to be taken by the pupil, nine out of ten persons, laymen and teachers alike, would give one of two answers: (1) Because it is useful, or (2) Because it is a valuable mental discipline. Probably almost every subject that has ever found its way into a curriculum of study from the kindergarten through the university first gained an entrance because of its supposed immediate utility. But once in, even though it has outlived its usefulness many centuries, it is apt to hold its place because of its supposed *disciplinary* value. Witness this in the arithmetical puzzles that now worry children, but which once represented business methods. I suppose that if ever a pocket talking should be invented whereby one could produce type-written copies of speech absolutely perfect, some pedagogues would still desire to give every boy and girl a full course of handwriting, because of its valuable discipline. If anyone wishes to get nearly the child's side of the question, let him try to compose profound thoughts in a foreign language, and to write them down with a scratchy pen and with the left hand.

Unfortunately, the logical sequence of topics and psychological symmetry have been the chief principles considered in the arrangement of courses of study. An attempt has been made to

[1] Read at the Teachers' Association of South-western Iowa.

seek those subjects which are supposed to afford exercise of a particular kind for the mind—a sort of gymnastics prescribed for a particular function. These subjects are then arranged systematically according to the logical development of the subject. Witness this in arithmetical studies, given supposedly for the purpose of developing the reasoning powers, and formerly pursued until finished before turning to geometry and algebra, which, though easier, do not logically follow the beginnings of arithmetic. Plainly the subject has been considered of more importance than the child.

In the primary school the courses are largely made up of studies that are supposed to prepare directly and definitely for higher work. Reading, writing, and arithmetic form the so-called staples of instruction. History and geography are included and frequently called information studies. Nature study is supposed to train the observation, and grammar is put in as a "disciplinary" study. Concerning the high school the idea has become widespread that it is chiefly a place for discipline and training and the cultivation of mental power. Every platform speaker at the opening exercises emphasizes the thought that if the pupils will only submit patiently to the prescribed exercises, later in life they will have become armoured for any sort of mental fray. In their commencement orations the fledgelings re-echo the thoughts about the paramount importance of mental discipline, though what they mean by it is still more hazy and undefined than in the minds of their elders. In the college and the university a few required subjects are still retained, but the number is being constantly reduced. The requirements are also becoming very different for different groups, and demanded because they are preliminary to the successful mastery of the group. Thus the disciplinary reason gives way to that of practical utility.

The doctrine of educational gymnastics has gained an alarming hold. Teachers are told that "mental power is a more valuable result of teaching than mere knowledge," and hence the process of acquiring becomes more important than the knowledge acquired. "Power abides; facts are forgotten," they

are told. Now, there is no psychological warrant for these assumptions. Great stress has been placed upon the assumed principle that the mind is a sort of mass of latent potentialities which proper gymnastics or grooming can awaken to activity. Through this activity it is supposed to have gained strength, and this strength is further supposed to be applicable in any direction. That is, it is assumed that mental power is something perfectly general and may be applied to any specific problem. As Dr. DeGarmo has stated the theory (in repudiating it), it assumes "that the mind can store up mechanical force in a few subjects, like grammar and mathematics, which can be used with efficiency in any department of life." "That is," observes Dr. Hinsdale, "the process that formal discipline assumes may be likened to the passage of energy from the fires of the sun, first to vegetation, and then to the coal beds and subterranean reservoirs of oil and gas, whence it is again drawn forth to cook a breakfast, to warm a drawing-room, to light a city, or to propel a steamship across the ocean."

This hypothesis, I shall try to prove, is entirely untenable, and we must seek some other basis for the selection of subjects for any school curriculum. Many analogies have been drawn from the realm of physiology in formulating theories of mind. This theory has undoubtedly derived much of its support from false physiological analogies, and it is to a consideration of that I shall first direct attention.

Dr. Hinsdale says: "The force engendered by any defined exertion of physical power is fully available for all like kinds of exercise, but only partially so for unlike kinds." Thus, the power or skill engendered by driving nails can all be used in driving nails, but only partially so in shoving a plane.

> Activity tends, first to invigorate the whole body—"tone it up," as we say—and, secondly, to overflow into new channels lying near to the one in which it was created. . . . . The facts do not prove that a reservoir of power can be accumulated by any one kind of effort that can be used indifferently for any and all purposes. There is no such thing as a formal physical discipline. Energy created by activity flowing in one channel cannot be turned at will into any other channel. A boxer is not perforce a fencer. A pugilist does not train promiscuously, but according to certain strict methods that experience has approved.

One of the most significant lines of psychological investigation in throwing light upon the question of general mental development through special training has been the investigation of memory-training. The popular mind declares that a child should memorize gems of poetry, proverbs, entire poetic and prose selections, etc., in the perfect belief that his general memory will be strengthened. Never was there a greater fiction. While it is a good thing to memorize gems of poetry, the reason usually assigned is a bad one pedagogically. The quotations should be learned for the sake of the thought, and not as memory-training. By careful experimentation Professor James and others have shown, and I have confirmed, that long practice in memorizing material of one kind in no way aids memory for totally different things. Even long attention to memorizing of poetic writing does not assist much, if any, in memorizing prose. Still less would the poetry assist in the memorizing of chemical names and geological specimens. Everyone can affirm this in his own experience. Every adult student, according to the popular doctrine, ought to possess a perfect memory for all things. The poor memory has been crammed and exercised on various studies for upwards of twenty years, but how many persons remember the names of persons they meet any better than they did in childhood? How many married men have infallible memories for mailing their wives' letters, or purchasing the spool of thread, or recalling the dress that somebody wore at the party, or the decorations of the house, or the setting of the table, the pattern of the glassware, etc.? I suspect that the more the mind has been exercised with Latin roots, antediluvian fossils, amœboid specimens, or mathematical formulæ, the less apt the everyday affairs are to be remembered.

We know also that there are many types of memories. One person has a good verbal memory; a second a memory for faces; a third for dates; a fourth has a good memory for facts scientifically arranged, but a poor desultory memory; another a memory for musical tones, etc. Now, if memory exercise in general operated according to the hypothesis of formal discipline, should not one's memories for all types be equally good? The fact is we have

memories rather than memory. The same line of discussion would be applicable to imaginations. Few people have imaginative powers equally strong in all directions. Still more striking are the examples of specialized development in those with phenomenal memories and imbecile understanding. Again, if the dogma of formal discipline were true, why should not the intellect, the feelings and the will all be developed equally? As a matter of fact, there are often the utmost extremes in the same individual. Even with a given power or faculty, we may find great extremes in the same individual. Take the judgment, for example. As Dr. Hinsdale remarks:

> No curious observer can fail to notice how practical ability to judge and to reason tends to run in special channels. Eminence in microscopy, in sanitary science, in engineering, in philology, in a thousand specialized pursuits is no guaranty of ability in other matters, or even of good sense in the common affairs of life. The only astrologer whom I have ever happened to know personally was an eminent civil engineer.

We hear much fiction concerning the efficiency of certain studies, especially natural science, in training to acuteness of observation. It has been taught that training to observe in one field will insure skill in other directions as well. Now, as a matter of fact, easily verified by common experience, training in observation is special in its effects rather than general. Training in observing zoölogical specimens, for example, will not give increased skill in observing music, grammatical niceties, or spring fashions. Should you meet two acquaintances on the street, the one a skilled botanist, and the other an uneducated person, the latter would be more apt to observe you than your biological friend. Dr. William T. Harris says:

> An education in science, although it fits a person to observe in the line of his own specialty, does not fit him to observe in the line of another science which he has not investigated. On the contrary, the training in one particular line rather tends to dull the general power of observation in other provinces of facts. The archæologist Winckelmann could recognize a work of art by a small fragment of it, but it does not follow that he could observe a fish scale and recognize the fish to which it belonged. On the other hand, Agassiz could recognize a fish from one of its scales, but could not like Winkelmann recognize a work of art from one of its fragments.

Thus it is evident that there is no class of objects nor group of subjects which forms a monopoly in training in observation. To become a good observer in any direction we must observe much and carefully in that direction. We must store the mind with a fund of information which will form an apperception mass, in the light of which new material becomes attractive and through which it is evaluated.

Professor Thorndike says:

> Our mental functions are rather highly specialized, and they may be to a large extent independent of each other, that training in one may not improve others markedly, or perhaps at all. For instance, if a person tries to train himself to observe and discriminate words by marking on page after page all the words containing *e* and *s*, he will not succeed in becoming observant or discriminative of the meanings or length of words. The training is really only of observing words as containing or not containing *e* and *s*,

and will not assist even in marking other letters. In an experimental test he believes he has shown that accuracy gained in arithmetic is not carried over into spelling. I presume few of the supporters of the doctrine of mental discipline would wish to have the efficiency of their mental powers measured by their spelling.

There are some very curious attempts to get one kind of a result from an entirely different form of training. Among the latest of these is the assumption that we are teaching morality through art and athletics. I have no word of fault with art or athletics; I believe in both; but we should be satisfied with developing the æsthetic sense through art and strong bodies through physical culture. Were morality a necessary function of art, Greece in her highest development of art would not have been the most corrupt in morals. Were morality a necessary function of physical development, we should find among savages many of the highest types of morality. To confirm our view that they are not necessary correlatives we would need only to mention a recent noble writer who was a poor hunchback and a sickly dwarf, and compare his morality with that of his brother, a champion athlete and a cowardly assassin; the former a hero, the latter a violater of nearly every command in the decalogue. The greatest hero in the football field may be the first to quail on

facing an audience; he may be one of the first to cheat in examination or to commit a crime. Should he sin his physical culture is not the cause. They are not in any way necessarily related. I heard a football enthusiast argue at the National Educational Association meeting that football develops those qualities which make men always co-operate in every enterprise. Now, he could equally well have said that in the football schemes where one side is seeking to get the advantage of the other side, there on the field the spirit of cornering the markets and forming coal trusts is developed. It is a game of co-operation—for one side; but how about altruism toward the opponents? All of these arguments are absolutely inapplicable.

Professor Hanus remarks:

> Power means ability to do something—to bring about results. The results achieved will always be in some one field of activity, however; and the kind of power developed through the pursuit of a given subject will consequently be usually restricted to power in dealing with data of a particular sort. That is to say, power in physics is different from power in Latin; and those forms of power are different from power in plastic art or pure mathematics, as these last are different from each other. There is no such thing as power in general that can be cultivated through the pursuit of any one subject, and can then be drawn upon at any time for successful achievement in other subjects. That a man shows power first in classics and afterward in mathematics or botany, for example, does not prove that the man's mathematical or scientific ability was developed through the classics. It proves only that the man has both linguistic and mathematical or scientific ability. It does happen, of course, that different subjects like mathematics and physics, or physics and chemistry, or drawing and painting, are closely related; and hence the data of one subject are often found to some extent in another, and also that the method of one subject can be appropriately applied to another . . . . But, in general, the relations of the subjects will not be close enough to justify the assumption that power may be developed through one subject for use in other subjects.

I next turn to a brief consideration of some of the subjects of instruction which are emphasized in the curriculum because of their so-called disciplinary values. Let it be understood at the outset that I do not aim to discredit the value of these subjects in the directions in which they have abundant values. I simply consider them to determine, if possible, the values attaching to them, and through that evaluation to assign them propor-

tionate place in the curriculum. The educationist should have absolutely no prejudices in the matter. The first of these subjects is Latin. Let us first inquire how this subject found its way into the curriculum. We find that during the Middle Ages Latin was required in all the church schools—and there were almost no others—for the reason that the Bible was accessible in Latin, and all the works on grammar, rhetoric, and logic, though excerpts in the main from the works of Aristotle, were also in Latin. The monks, the clergy, and all who pretended to learning spoke Latin; all books were written in Latin; in fact, it was the one universal language establishing a bond among all the educated men of the world. Even after the gradual evolution of the various continental languages and literatures, as well as English, the Latin still remained an important medium of communication as a universal learned language.

These facts are too well known to need more than mention here. But it should be borne in mind that the language gained its great hold at a time when it was a practical necessity. Of course, it took a long time for schoolboys to master it, because they did their thinking and ordinarily expressed themselves in another tongue—their vernacular. Hence it is no wonder that in Sturm's epochal Strassburg course of study, Latin in all its variations occupied about eight-tenths of all the school life. The vernacular was not deemed worthy of cultivation.

Based upon continental models, the grammar schools and great public schools of England developed upon monastic foundations. These, in turn, furnished the pattern for the grammar schools of New England. These grammar schools were founded "to fit ye youth for ye university." Now, the colleges of the New World—Harvard, Yale, King's (now Columbia), William and Mary—were all patterned after old Oxford, with all their monastic traditions and ecclesiastical tendencies. The secondary schools, in turn, were primarily fitting schools for the colleges. Such, in brief, is the way in which our schools became so Latinized. Greek gained a large place following the Renaissance. It came not so much in response to practical demands as in an attempt to wear the finery of an illustrious people in the hope of thus becoming illustrious.

Now, after having outlived their practical necessity, occasionally someone has stopped and inquired why they were retained. Tradition kept them there, and the upper schools require them, would be the real answer; but the answer has been: "They are there (1) because of their great value as a discipline in education; (2) because of their practical value in giving an understanding of the vernacular." The first answer is based (1) upon the fact that they have such a large hold, and *ergo* must be valuable; and (2) because it is said that all the great men have been trained to strength by means of this régime. It is said that all the best students in the schools come from the classical course. Let us search out the fallacy. In the first place, the best students expect to go to college. Now, what do the colleges demand for entrance? In the second place, only the best ones take the classics, because they are traditionally difficult. Under such conditions, why should not all the best students come from the classical course?

Is there any basis of fact in assuming that those who take the traditional classics and mathematics are stronger mentally and better trained for life's duties, more fitted for the higher enjoyments of life, for service to humanity? True, there are multitudes who come up to these measurements who have been so trained; but is it not because all who aimed at this believed that the traditional road was the only one? Many of the world's illustrious have never been schooled in the traditional arts, and many who have been so schooled have not become illustrious. We need only to name such men as Shakespeare, who knew little Latin and less Greek; and Lincoln, trained in the school of adversity; and call attention to the many illustrious Chinese, Japanese, Hindoos, Russians, and those of other nations in the present and the past, to show that there are other schools which may develop all these desirable qualities.

Mr. C. H. Henderson writes:

> One cannot help being struck anew with the numbers of people who have come to distinction quite outside of the formal educational process, not uneducated people, but people educated outside of the schools, by life itself. The great literatures and fine arts and heroisms have not been the exclusive,

or even the general, performance of the learned. The great things have more commonly been done in the large open of life, done by men and women of organic powers, and sincere lives, and warm hearts.[1]

While cheerfully acknowledging that most of the best, wisest, most useful men of our time in America and Europe have taken the traditional course, may we not rightfully inquire whether their culture and wisdom have not been gained through contact with men of wisdom and culture, and not through any special discipline, least of all through subjects which have not caused them to think wise thought? (I refer here, of course, to the grammar and translation period.) We send the boy to college, and then ascribe his development to the formal discipline rather than to the inspiration received through close contact with worthy minds. Would he not have emerged from the college at graduation equally wise, equally cultured, equally useful, had an entire substitution of subjects been effected? I am inclined to believe that one could not tell B.A.'s from B.S.'s unless they were labeled. I believe this is exactly the meaning of the single degree conferred by Cornell and other universities.

During the Middle Ages in Europe I can readily understand that a knowledge of Latin was indispensable to culture. It formed the only means of communication with the world of learned men and the only medium of entering the world of letters. But the most classic period of human history was the most barren of productive thought and the fullest of bigotry, intolerance, superstition. It was because of dead formalism, logic without sense, and not because the learned spoke Latin. But the fact shows that Latin, or any other language, *per se* cannot develop culture. The thoughts themselves are of significance rather than the vehicle. The Renaissance was a turning away from dead formalism—from grammar, from rhetoric, from linguistic dexterity—to a study of realities—naturalism.

Admitting that great values come from the study of Latin, permit me to suggest that the average high-school pupil gets little of the so-called culture value. Professor Thorndike, of Columbia, made an investigation to determine the amount of

[1] HENDERSON, *Education and the Larger Life*, p. 113.

knowledge and appreciation of Roman life and civilization that had been obtained through a study of the Latin. This understanding of the character, life, institutions, etc., he supposes is what is meant by "culture" as coming from the subject. He gave a considerable number of students of Latin the following questions: "(1) Was Cicero courageous? (2) In which were the Romans most proficient, making laws, writing books, or building beautiful buildings? (3) Which were the Romans most like, the English or the Americans? Why? (4) Is there any other reason for reading Cæsar besides the wish to learn the Latin language?"

The answers, he says, show a surprising ignorance of the simplest historical facts which might be gained. He writes:

> It seems fairly sure that the average high-school student is more likely to be misinformed than instructed about Roman history by his year's reading of Cicero. He gets only a superficial stratum of fact and may be utterly mistaken in his interpretation of it. The text seems to have failed signally to arouse any useful interest in the man Cicero or the times.

The right answers he was led to believe were derived from reading the history of Rome in the English. At most he feels sure that a greater appreciation of Roman civilization could have been gained through studying Roman history in English less than two hours a week for a year than was gained through four years' study of the language.

Now, I believe that Latin properly studied may have great value for English, but some even doubt whether it has the value often supposed. Dr. Alexander Chamberlain, of Clark University, whose anthropological investigations have received such merited attention, asserts that much of the supposed value of Latin for English has little foundation in fact. He asserts that Latin is not the basis of English; that Latin has no more shaped the English tongue than Rome has built the Saxon heart or made the Saxon arm. English grammar is soundly Anglo-Saxon run through the sieve of a mind that never had a Latin bent. The vocabulary in use is largely Anglo-Saxon, too. All the Latin in English has been pickled in Anglo-Saxon brine. All the Latin in modern English is thus pretty well pickled. Before it went

into the brine, too, every bit of Latin had the Anglo-Saxon meat inspector's mark upon it. And a good many carcasses went to the soap factory.

Dr. Nicholas Murray Butler contends that the only way to regenerate English is to go back to the Bible, *i. e.*, the Anglo-Saxon version. I do not wish it understood that I should like to have the classics banished from the schools and colleges—by no means. I intend that my children shall have an acquaintance with them. I believe that they possess educational values peculiarly their own. But these values are not the ones usually ascribed to them. And a correct estimation of these values would place them in our schools in different proportions. In the first place, I believe that they have a value in contributing to an understanding and an appreciation of our own vocabulary. But this does not necessitate years of translation and finicky parsing. The end should not be translation at all; for translation English is proverbially poor English. In the second place, they have a value in contributing to habits of carefulness of thinking. This, however, is not peculiar to the classics. German, French, Russian, and non-language subjects would do the same, if taught continuously. A third value is one similar to that coming from biological study. In biology we study the evolution of physical structure; in the classics, the evolution of psychological processes. Through language development the comparative psychologist has gained some of his most important chapters. History comes in the same category; or, more properly, biology, dead languages, sociology, anthropology, genetic psychology, paleontology, geology, are all historical subjects. No historian has completed his education who is not sufficiently conversant with these fields to appreciate their significance.

If Latin and mathematics are so valuable and contribute so much to strength, why are they not kept up after school days are over? We keep up literature, history, science, and sociology, and feel that we grow and expand because of them. But I am afraid the lexicons and the mathematical manuals become very dusty. The truth is that they have vital interest to only a limited number. Now, these things which touch our lives are

the things which cause us to think and to develop. And as education is life and life is education, should we not bring into curricula a greater proportion of those things that have a vital relation to life and its interests?

I believe that much energy has been misapplied in education because of the fallacious notion regarding the nature of mind. So long as the old doctrine of innate ideas is held in any form (though disguised so as to be hardly recognizable), a wrong view of education must ensue. According to that theory, the mind is preformed with all its possibilities foreordained; and the business of the educator, says Socrates, and so says the Middle Age philosopher, is to draw forth by exercise, by gymnastics, develop these ideas, and bring them to maturity. In physical development the same theory was acted upon. Exercise, the trainers said, is the *sine qua non* for physical development. The strength is there; it needs only training to make it manifest. While partly true, still another indispensable factor is only just beginning to be recognized. The modern trainer not only provides gymnastics, but a training table as well.

Now, the mind also grows by what it feeds on. The mind is a functional product of all its past experiences. It cannot exercise on nothing. It is exercised only when dealing with facts. It grows only as experiences accumulate, To chew sole leather would furnish exercise, but little nutriment. Mental gymnastics upon valueless material is equally inane.

The apperception theory of the mind, first formulated by Herbart, changes the whole point of view of instruction and education. According to this theory, the mind can grow in a given direction only through experience received in that direction. Vague and general gymnastics cannot develop the mind, because it can lay hold only of those new experiences for which former experiences have fitted it. According to this theory, we cannot develop the sight without seeing, the hearing without hearing, the emotions without feeling. The subject-matter then becomes of great moment. It must have desirable content, and not be mere form; must nourish, not merely discipline. To teach a boy to think, he must have something to think

about. No formal logic ever made a thinker. The mind must have facts to compare.

Those subjects develop the mind most which cause the most thought. Now, which of the subjects occupies the pupils' thoughts the most when not actually required to prepare his lessons? It seems to me there can be but one answer: those which deal with things and human activities. What subjects deal with these? Plainly literature, history, economics, sociology, science. The *Record-Herald* showed upon investigation that in almost every public library boys were seeking books on electricity. It would be interesting to see how many seek Cæsar or Xenophon in the original. Great stacks of history and literature find their way without compulsion into the boys' and girls' hands.

The boys and girls in the high schools are just ready to grapple with many of those important problems which occupy the theater of action about them. Listen to their debates. What do they choose for topics? How, I ask, shall we fit them to form intelligent opinions about strikes, tariff, Cuban reciprocity, Philippine independence, the city taxes, St. Louis boodlers, government ownership, etc.? Kaiser Wilhelm said they must train up young Germans, not Romans. Similarly, we must train up young Americans, not young Greeks or Romans. Very significant is the dropping of compulsory Greek in the German gymnasia and the substitution of optional English. It is a measure designed to help enable the young German better to adjust himself to his environment. Latin and Greek have also been omitted from entrance requirements to London University.

Our boys and girls of today are to be in the midst of the world's affairs tomorrow; and still, in view of this, there are those who would designedly shut them off from the world, busy them with expressions of thought absolutely remote from present-day interests, make them learn mathematical formulæ, which the majority will never use directly or indirectly; all in the hope, well meant, that they will thus learn to think. The only way to learn to think is to have something to think about. If we merely wished to give something hard, why not give them Russian or chess?

In view of the foregoing, may we not conclude that the different studies should be arranged so that the traditional subjects shall receive no more attention than others, except from those pupils who intend to specialize? The course might well include some Latin for all, possibly a year, and more for those who specialize. It certainly ought to include some modern language, as that is a means of gaining touch with present-day civilization, affords as much so-called discipline as the classics, and is very apt to be of direct value. English should be accorded its rightful place, not as a parsing exercise—we spend years too much time on that sort of profitless work now—but English which leads the student into all the best thoughts of all times. The youth should become saturated with the greatest literature, and through the ideas assimilated his entire life should receive bias and direction. The sciences should be included in every course for every student—not enough to be specialized, but enough to open up the whole vista of possibilities. History should be accorded more than the stingy place now given it. All should be given introductory courses in algebra and geometry, but two years in the high school should be ample. Is it not inconsistent, when we plead for all-around culture, and then shut the youth up through over half his school days with nothing but words, words, words? The narrowest sort of specialization! The one who studies natural science three or four years is dubbed a narrow specialist; the one who studies dead languages twice as long is said to be gaining all-around training and laying a broad foundation.

Then, lastly, there should be added to the groups a line which we may term the social group. In it would be included civics, something of political economy, social facts and forces, ethics, if possible a little psychology, and a consideration of educational questions. I do not mean the pedagogy of teaching arithmetic, but such questions as school taxes, the relation of the school to the state, its value to society, the significance of early education in correct habits, the value of co-operative educational factors, etc. In the university no mathematics should be required except in the scientific course, and no classics except in the classical

course. According to real needs, I believe we should require of all, history, economics, sociology, psychology, and education. These are the ones that help most in producing an adjustment to environment.

We must break down the false notion of the absolute difference between that which is of utility and that which affords culture. In an ideal education they will be identical.

Any study is cultural and highly educative which gives power (knowledge); puts one in touch and in sympathy with civilization; makes one open minded; gives one breadth of interests; makes one interesting and likable, refined, and useful to society. True culture means developed intellect and refined feelings; deals with morality as well as things intellectual. President Draper says that one may obtain culture from Latin and Greek, also from building bridges. Those subjects, then, it would seem to me, afford most culture which come nearest to life's interests. No study in the course has a right to a place for its formal discipline alone. Who would crack nuts for the exercise in cracking them? The facts themselves should be of sufficient value to justify their contemplation. The old doctrine of educational gymnastics must give way to the new one of nurture. The mind grows by what it feeds on, as well as through exercise.

All development in nature has come about because exercise in a given direction has produced development in that direction. Hence, if we would develop the pupil physically, he must have physical exercise and food; if he is to be developed mentally, he must have mental food and exercise; if he is to be developed morally, he must have moral nutrition, *i. e.*, knowledge of things moral, and be exercised in the performance of moral acts. If the pupil's social nature is to be developed, there is but one way, and that is by placing him in a social environment. The one who pores over his grammar and his mathematics, and excludes himself from society will grow up anti-social. Now, all school life from the kindergarten through the university should have for one purpose the discovery of aptitudes and the developing of the same. These interests should be many-sided. Since growth is special, breadth of interests, largeness of view, and judicial-

ture may have been, unless the great truths and worthy ideals have been transformed into spiritual forces, all is unavailing. Civic ideals and moral virtues may have been rehearsed, but only when they have quickened dormant possibilities into abundant life have they been to any worthy degree educative. Now, great, inspiring, living teachers can do infinitely more than the mere pursuit of a subject toward the determination of what shall take root. Next, and perhaps not even second in importance, is the influence of companions. Someone has said with great truth: "We send our boy to the schoolmaster to be educated, but the schoolboys educate him." They largely determine a youth's interests, and almost entirely his actions. And, after all, actions count most. We will with all we have willed, and every act is the beginning of a habit that becomes a lifelong phantom tyrant.

Hence, although every subject may contribute to will-power, the direction in which that power will be applied is absolutely determined by the great interests and passions which may happen to lay hold of the youth's life. So the course of study, the paper curriculum, which every new principal "revises," is a secondary matter. The all-important thing is to have great souls which breathe out abundant life, inspiring and invigorating all with whom they come in contact.

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EDITORIAL NOTES.

GEORGE HERBERT LOCKE.

AN INSPECTOR OF SECONDARY SCHOOLS FOR ENGLAND

THE BOARD OF EDUCATION having control of the schools of England under the new Education Act is making a decided effort to offset the criticism of the Nonconformists by emphasizing the idea that the Act was an effort toward the legitimate organization of educational effort in England rather than an effort toward the firmer establishment of the religion of the Established Church. This is apparent in the interest being shown in the appointment of inspectors who have exceptional qualifications for the work of organization. Perhaps the most noteworthy appointment, and certainly the one in which our readers will be interested, is that of Mr. W. C. Fletcher to the position of Chief Inspector of Secondary Schools. We note that he is a comparatively young man, a Cambridge man, for nine years a Master at Bedford Grammar School, and since 1896 Head Master of the Liverpool Institute, a large secondary school. He has also been chairman of the Examinations Committee of the Incorporated Association of Head Masters of Secondary Schools, so that he enters upon this very responsible work fresh from the work of the schools.

BRAINS AND TARIFF REFORM

A VERY interesting series of special articles on Germany has been appearing in the *Times* of London, and although the writer's purpose is to confine his remarks to industrial conditions, it is very noticeable how he invariably gets back to the cause of progress, viz., education. He tells of a visit to Crefeld, where in a mill of moderate size he found eighteen young men, trained in the textile school, at work in the designing room. One of them was engaged at the time with a customer, a dealer in dress materials, and the two were working out ideas together, making sketches, criticising, and altering. This is how fashions in new materials are evolved. The expert designer and dyer invent ideas and combinations, which are submitted to customers, or they translate the ideas of others into practical shape. Single manufacturers will employ from sixty to eighty designers for a period of several weeks in preparation for a new season. It is only in this way that a hold on the market can be retained. The writer goes on to say that Germans have particular need of carefully trained skill for the work, because they are not naturally inventive or gifted with the innate sense of elegance possessed by the French. Consequently the manufacturers give liberal support to the textile schools and further encourage them by providing employment for the graduates. There is no doubt

about this being a good business transaction. A manufacturer in Elberfeld showed the writer a length of dress material. "That," he said, "is going to England, and it is made of English stuff. I get the materials from England, manufacture them, and send them back. I pay carriage both ways, and yet I can sell this in the English market." "How do you manage to do it?" "Well," he replied, "you see this is a nice design; there is brains in it." It was a good answer, and the writer believes that it is a complete answer, for he pays higher wages and more for coal than manufacturers of similar goods in Yorkshire. Manufacturers in England often complain that German and other foreign competitors steal their designs, and there may be much of truth in such a statement. They do the same and steal French designs. Every nation helps itself to the ideas of others; but it is not possible to go on competing successfully with borrowed brains and second-hand ideas. The nation which is richest in ideas will come out first, and the Germans realize that thoroughly.

Training Colleges for Teachers in New Zealand

In these days, when the training school for teachers and the college are coming nearer together, that the students of both may receive a more economical and efficient training for the important profession upon the work of which they are about to enter, it is interesting to notice that on the other side of the world like ideas are abroad. In the progressive colony of New Zealand the Education Committee has prepared a bill which provides that training schools shall be established at the four principal university centers, Auckland, Wellington, Christchurch, and Dunedin; to avoid the expense of duplicating instruction in subjects that are taught at the university colleges, and to secure for teachers the greater breadth of view, the training of teachers in literary and scientific work will, as far as possible, be provided by the university colleges; there will be a two-years' course of training for each student; the lecturer on education at the training college will be given the status of a lecturer or professor at the university college that his lectures may count in the university course of the students; the practicing department of each training college will include a model country school with but one teacher. This last provision is unique, but what might be expected from the colony which is so practical in its dealings with great social questions.

The Public Schools and Religious Instruction

A very interesting controversy on a very old subject has been engaging the attention of Archbishop Quigley of Chicago and President Edmund J. James of Northwestern University. The archbishop introduced the discussion by advocating the denominational control of schools, and asserting the impossibility of having successful schools, by which he meant schools that accomplish the high purposes of education, unless there is religious instruction given in them. President James at the Illinois Teachers' Association ably presented the claims of the public school to recognition as the great moral force of the

nation. The resurrection of this seemingly settled subject in this country is perhaps due to the controversy in England consequent upon the passing of the Education Act, which gave additional recognition to the influence and place of religious instruction in the schoolroom. A most significant utterance on this subject was made in a recent political speech in the city of Nottingham by Mr. John Morley, certainly one of the most representative of Englishmen. He said:

> A very important letter, of which I wish to speak with all respect, appeared recently in the newspapers from the Archbishop of Canterbury, addressed to a Nonconformist minister. I think that the archbishop showed himself to be wiser than the prime minister [cheers] and the head of the church seems to see much more clearly than the head of the state. [Laughter and cheers.] When you find such a letter as that written, will it not convince even ministers themselves that their Act has kindled an amount of exasperation and passion which ought least of all to have been aroused upon education [hear, hear]— education, the thing that ought to unite, not divide? [Cheers.] When they see that, they will feel that what they propose as a settlement of the educational difficulties has been, in effect, an opening of new difficulties; and as for the sweeping away of those well-established and well-worked institutions, the school boards, that, surely, was one of the greatest errors of which a British administration has ever been guilty. Now I am going to do a bold thing. Many of you will not agree, perhaps most of you won't agree, and I have only this sentence upon it. I shall be prepared to defend it bye and bye, when the occasion offers. My own view has been, ever since I began to think about public things, that you will never come to a wise settlement until you have removed altogether the hand of the state from religious instruction. [Cheers.] Religious instruction is a thing for the parents — it is not a thing for the state — and I, for my own part, can never be cordial to any policy, and any changes in policy, which do not recognize the principle that the state is concerned with secular things, and has no concern with religious things. [Cheers.]

LATIN REQUIREMENTS FOR HARVARD AND YALE

Mr. J. Edmund Barss, of the Hotchkiss School, contributes to the *Latin Leaflet* an interesting comparison of the requirements in Latin for admission to Harvard and Yale. As might be expected, there is a substantial agreement in the amount of work prescribed, but a disparity which renders the work of the teacher difficult occurs when the organization of these requirements and their disposition in the examination system is considered. Yale requires in the *Preliminary:* Cæsar and Nepos at sight; Cicero, *In Catilinam*, I–IV; *Pro Archia; De Imperio Pompei* or an equivalent. In the *Final* there must be offered Ovid at sight; Vergil, 5,600–6,300 verses. Harvard requires in the *Preliminary:* Cæsar and Nepos at sight; Cicero, *In Catilinam*, I–IV; Vergil, or Ovid and Vergil, 2,000–3,000 verses. In the *Final* there must be offered Vergil, or Ovid and Vergil, 3,000–8,000 verses (depending partly on the amount read for preliminaries); *Æneid*, I–VI, is *prescribed* as part of the verse requirement; Cicero, orations additional to those read for preliminaries, making *in all* 90–

120 Teubner pages. Were there no division in the examination, the likeness would be far more striking. For the Harvard preliminaries the candidate *must* have had some poetry. He does not require so much prose as at Yale. Mr. Barss proposes that Yale should accept for preliminaries four orations of Cicero and two (or three) books of Vergil; postponing the rest of the Cicero, the rest of the Vergil, and the Ovid until the final examination. He points out that such an arrangement would make the program practically coincide with the recommendation of the Committee of Twelve of the American Philological Association, and have the double advantage of leaving no year without its prose to influence the Latin composition, and preventing the monotony consequent upon giving an entire year to prose or poetry alone. This is a question of arrangement, and we can see no reason why the suggestion made by Mr. Barss should not be seriously considered by the representatives of these colleges. It seems a very small thing, but it is to these small and seemingly unimportant things that some of our colleges cling tenaciously, and the way of the high-school teacher is made hard thereby. Mr. Barss says that the universities have missed the point that if only the examinations permitted the same portions of the same authors to be read at the same time, a teacher would rather welcome than complain of those slight differences which proceed from the private convictions of examiners, as encouraging a roundness of preparation, beneficial alike to the candidates for admission to either college.

HERBERT SPENCER

We are indebted to the *British Weekly* for the following appreciation of the life and work of the great English philosopher who did so much for the cause of education both in his own land and in our great republic:

The death of Herbert Spencer occurred at Brighton on Tuesday morning, December 8, at 4:46, after a night of unconsciousness and a prolonged illness. Mr. Spencer was born at Derby on April 27, 1820. His father was a schoolmaster and a Nonconformist. Spencer was familiar from the beginning with the doctrines of Methodists and Quakers. More powerful even than the influence of his father was that of his uncle, the Rev. Thomas Spencer, of Hinton Charterhouse, near Bath. Though a clergyman of the Established Church, and an early friend of that shining Evangelical light, Dean Law — to whom, by the way, he owed his living — Thomas Spencer was a Radical, a teetotaler, a Chartist, and an Anti-Corn Law propagandist. Herbert Spencer was under the care of his uncle from the age of thirteen, and in the natural course of things would have studied at Cambridge, but then, as always, he was averse from academic education, and preferred to follow his own bent. For some years he was employed as a teacher and an engineer. The bent of his mind, however, was to literature, and when he was only twenty-two he published a remarkable series of letters in the *Nonconformist* on "The Proper Sphere of Government." The *Nonconformist* had been published little more than a year, and was edited by Edward Miall. It is interesting to look at the early volumes. About a half of the little paper was

devoted to the fight against church rates, and the other half to the Anti-Corn Law propaganda. Sixty years ago our fathers were fighting the foes that confront us today. If we remember rightly, it was through the influence of the late Dr. J. H. Wilson, of London, then sub-editor of the *Nonconformist*, that young Spencer's letters were admitted. They can hardly have been very welcome, but they are of intense interest for their sobriety, ripeness, decisiveness, and intense individualism. In them may be found the text of Spencer's lifelong preaching. The office of government according to him is "not to regulate commerce; not to educate the people; not to teach religion; not to administer charity; not to make roads and railways; but simply to defend the natural rights of man — to protect person and property — to prevent the aggressions of the powerful upon the weak; in a word, to administer justice." The establishment of a state church is violently opposed, and not less strong are the young thinker's objections to national education. Spencer through all his life had a friendly feeling for Nonconformists. He defended them against Matthew Arnold, and as late as 1882 he wrote to the *Nonconformist* welcoming help for the Anti-Aggression League. "I infer that the co-operation of that influential part of the community which your paper represents may be hoped for. It is a favorable sign of our times that religious differences, no matter how extreme, do not prevent the united action of men who agree in their moral aims. Many of those who, like myself, do not accept the theological doctrines of the current creed, yield to none in their desire to see its ethical doctrines prevail. . . . . Through several channels have already come proofs that the various organized bodies of artisans may be counted upon to give active support to the Anti-Aggression League. Their strength, if joined with that of the Nonconformists, and made permanently available by a proper organization, ought to put an effectual check on the aggressive tendencies of our military and official classes." We have the best reason to know that in the closing months of his life Mr. Spencer was deeply interested in the fight against the Education Acts. If he had lived, he would have published the autobiography which he kept so long in print as a testimony to his convictions on the side of freedom. It was in 1848 that he became a sub-editor of the *Economist* under Wilson. He also formed a connection with John Chapman, the publisher and editor of the *Westminster Review*, to which he contributed many articles. Mr. Spencer was on very friendly terms with George Eliot when she was known only as a reviewer and a translator. It is said that he introduced her both to George Henry Lewes and to her husband, Mr. Cross. As early as 1850 he published his *Social Statics*, and in 1860 he sent out the syllabus of his *Synthetic Philosophy* in ten volumes. This he lived to complete through rare persistence and strict adherence to the plan of life which he found best suited to his capacities. Mr. Spencer was never married; he was what might be called eccentric in his habits; he persistently refused honors of every kind; he was never affected by the desire for popularity; but he made some warm friends, and kept them to the last. On another occasion we may write more about his ways of life, but it is sufficient in the meantime to point out that in his books he was the effective philosopher of the evolution movement. He attempted a Synthesis of Scientific Knowledge. Of the tenacious industry, the noble self-renunciation, the single-minded regard for truth, the lucidity of style, the immense reach of thought and knowledge which belonged to him it would be almost impertinent to speak. For a long period he was a dominant influence, and

even now he has many and powerful followers. Perhaps he failed because he attempted too much. He employed assistants to collect facts for him, and on one occasion at least the value of their labors was seriously questioned, and formed the subject of an acrimonious discussion in the *Academy*. Mr. Spencer did not profess to be a great reader. He was wont to say that if he had read as much as other people, he would probably know just as little as they. One of his friends says that almost all his reading must have taken place at odd moments, just after breakfast, after lunch, and in the afternoons at his club. Much material was put at his disposal by his friends. He was skilful in the art of putting questions, and supremely skilful in the systematizing of the knowledge he acquired. But as the sciences have advanced, and as the thinkers of the twentieth century have modified the earlier ideas of matter and force, much of Mr. Spencer's work appears to be antiquated, while his philosophical justification of the *laisses-faire* philosophy of the old Liberals commands little assent. There is no question, however, as to the greatness of his intellect, the nobility of his character, and the continuous and astonishing suggestiveness of his work. Perhaps no such great intellect as his is now left to us.

NOTES.

THE chief characteristic of the American development of schools within the last thirty years is the decided improvement of the schools as machines. The national aptitude for mechanical invention has here been impressively exhibited. Both public and private schools have been better organized, and have been provided with better buildings, apparatus, and books; and the children in them have been more accurately graded with respect to mental size, capacity, and attainment — just as the chickens which come through the incubator and the brooder on large hen farms are more accurately sorted and grouped according to size than any single hen's brood can be, so that the stronger may not hurt or starve the weaker. Great improvement in rural schools has resulted from bringing the children daily from the farms by wagons into the central village, in order that one large graded school can be carried on at the center, instead of many widely scattered small schools in which accurate grading is impossible. This improved machinery would be a doubtful blessing, if its smooth working did not require and encourage the employment of a superior class of teachers; but the evils of the machine — the lack of attention to the individual child, the waste of time for the bright children, and the tendency to work for a fair average product instead of one highly diversified — are done away with so soon as a large proportion of teachers to pupils is employed — such as one teacher for from sixteen to twenty-five pupils — while the many advantages of the good machine remain.

The American idea that every child should go to school is not carried into effect in a single state. The National Educational Association has lately called attention to the fact that in the so-called Indian Territory, which is under the control of Congress, three-fourths of the population are reported to be without schools for their children. As regards school administration, there is great diversity of practice in the American cities. New methods have been tried within the last ten years in many important cities; but there is no agreement as yet even on such fundamental matters as the best number for a school committee, and the best mode of selecting the committee. In some cities the school administration has been completely separated from other municipal business; but in others the board of aldermen or the common council controls the school committee in its expenditures, and even in its appointments. So numerous are the experiments now going on in school administration, and so successful have been some of the most radical experiments, that it is altogether likely that the next few years will see great changes in the methods and forms of school administration. At any rate, the last ten years have been a period of active and instructive experimentation.

There are now a considerable number of schools in the United States which undertake to supply all the influences of home, church, and school, at the most impressionable period of life. Such are the endowed schools for the children of rich people, the cheap country academies in or near which the great majority of pupils must board, their homes being at a distance, the preparatory departments maintained by many western and southern colleges, and the private schools, situated in the country, which rely on boarding pupils. These numerous schools have prospered during the last twenty years, because of the increasing number of families that can afford to send their children to school away from home, and because of the great increase of the urban population at the expense of the rural. The contrast is strong between the public day school in a city, which spends on each pupil only from $30 to $40 a year, and the endowed school in the country, where each child costs its parents from $800 to $1,000 a year, vacations not included.

American school conditions are, then, so very different that one would hardly expect to find any general principles of equal application under such diversified conditions. Nevertheless, there seem to be a few unconnected considerations which apply in some measure to all schools, although they must be applied in different ways by parents or teachers who have chiefly in mind a particular child or a particular school. These considerations, however, though unconnected, naturally fall into two groups — those which concern education in general, and apply equally well to school training and to home training, and those which are chiefly, though by no means exclusively, applicable to schools. In the first group four distinct topics will be discussed, and then in a second group six mental habits will be considered which schools of every grade, large or small, in city or country, should endeavor to form in their pupils, with or without assistance from the pupils' homes.

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The contempt in which cultivated persons have habitually held the useful or utilitarian in education has probably been due to the association of the useful with the selfish or mercenary. Now, the nineteenth century gradually developed a new conception of the useful as the serviceable, to one's self through others, and to others through one's self. This new conception of the useful ought to modify profoundly the whole course of education, in its materials, methods, and results. Humanism and idealism eternally contend against animalism and selfishness, and seek perfection. On the way to idealism, altruism needs to be cultivated in children to offset their natural egotism, and to enlarge their conception of usefulness, so that it shall be no longer conterminous with selfishness. In this view, the more productive the labor of children can be made, whether at school or at home, the better for the children. Any employment for children which enables them to produce something wanted by others affords training in altruism, and is therefore idealistic or humanistic, if the motive be made plain, and be enforced, and if the operation itself afford

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THE HIGH-SCHOOL PROGRAM OF STUDIES AND THE STUDENT'S CURRICULUM.

II.

PART II.

In the first part of our discussion, after quoting definitions of "program of studies," "curriculum," and "course of study," and taking a view of the whole field of secondary studies, we proceeded to mention the general considerations, pedagogical, physiological, sociological, and æsthetic, that influence the expert in his organization of a high-school program of studies. We now proceed to particular considerations, using California conditions by way of illustration.

PARTICULAR CONSIDERATIONS.

1. *State law.*—In making his selection for the school program, the organizer thereof in California needs to bear in mind the state law, which declares:

> Said course of study shall embrace a period of not less than three years, and it shall be such as will prepare graduates therein for admission into the State University. The high-school board may prescribe an additional course or additional courses of study, subject to the approval as hereinbefore provided [*i. e.*, the approval of the County Board of Education].[1]

2. *University requirements*—Since the state law requires that the students graduated from high schools in California shall be eligible for admission to some department of the State Univer-

[1] *Political Code*, Art. XII, sec. 1670.